STIC Search Report
EIC 1700

STIC Database Tracking Number: 148023

TO:	From:
Sin J Lee Location: REM 9D60 Art Unit : 1752 March 28, 2005 Case Serial Number: 10/773930	Les Henderson Location: EIC 1700 REM 4B28 / 4A30 Phone: 571-272-2538 Leslie.henderson@uspto.gov

Search Notes

Search Notes
(Please Scan ALL)

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact ***the EIC searcher or contact:***

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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BIBDATASHEET

Bib Data Sheet

CONFIRMATION NO. 7400

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/773,930	02/06/2004 RULE	430	1752	FIS920030408US1

APPLICANTS

Wenjie Li, Poughkeepsie, NY;

Pushkara R. Varanasi, Poughkeepsie, NY;
Alyssandrea H. Hamad, Cincinnati, OH;

** CONTINUING DATA **********

None SJL

** FOREIGN APPLICATIONS **********

None SJL

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 05/05/2004

Foreign Priority claimed ☐ yes ☑ no 35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance Verified and Acknowledged Examiner's Signature SJL Initials	STATE OR COUNTRY NY	SHEETS DRAWING 3	TOTAL CLAIMS 30	INDEPENDENT CLAIMS 2

ADDRESS
30449
SCHMEISER, OLSEN + WATTS
SUITE 201
3 LEAR JET
LATHAM , NY
12033

TITLE
Negative photoresist composition involving non-crosslinking chemistry

FILING FEE RECEIVED	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue)

h e e e e e c e ce e b hee c b

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=> d his ful

     (FILE 'HOME' ENTERED AT 09:51:01 ON 28 MAR 2005)

     FILE 'HCA' ENTERED AT 09:51:09 ON 28 MAR 2005
                E LE WNEJIE/AU
                E LE WENJIE/AU
                E LE WENJII/AU
                E LI WENJIE/AU
L1           144 SEA ABB=ON  PLU=ON  LI WENJIE/AU
                E VARANASI PUSHKARA?/AU
                E VARANASI PUSHKARA R?/AU
L2            41 SEA ABB=ON  PLU=ON  VARANASI PUSHKARA R?/AU
                E HAMAD ALYSSANDREA/AU
                E HAMAD ALYSSANDREA?/AU
L3             9 SEA ABB=ON  PLU=ON  HAMAD ALYSSANDREA?/AU
L4             0 SEA ABB=ON  PLU=ON  L1 AND L2 AND L3
L5             7 SEA ABB=ON  PLU=ON  L1 AND L2
L6             0 SEA ABB=ON  PLU=ON  L1 AND L3
L7             0 SEA ABB=ON  PLU=ON  L2 AND L3
                D SCAN L5

     FILE 'LREGISTRY' ENTERED AT 09:58:15 ON 28 MAR 2005
L8              STRUCTURE

L9              STR L8

     FILE 'REGISTRY' ENTERED AT 10:03:03 ON 28 MAR 2005
L10           50 SEA SSS SAM L9
                D QUE STAT
                D QUE STAT

     FILE 'LREGISTRY' ENTERED AT 10:51:34 ON 28 MAR 2005
L11             STR L9

     FILE 'REGISTRY' ENTERED AT 10:52:14 ON 28 MAR 2005
L12           50 SEA SSS SAM L11
                D QUE STAT
                D QUE STAT
L13       104129 SEA SSS FUL L11
                SAV L13 LEE930/A

     FILE 'LREGISTRY' ENTERED AT 10:58:39 ON 28 MAR 2005
L14             STR L11

     FILE 'REGISTRY' ENTERED AT 11:05:59 ON 28 MAR 2005
L15           50 SEA SUB=L13 SSS SAM L14
                DIS
L16        36454 SEA SUB=L13 SSS FUL L14
                SAV L16 LEE930A/A

     FILE 'LREGISTRY' ENTERED AT 11:07:31 ON 28 MAR 2005
L17             STRUCTURE L14
                D QUE STAT

     FILE 'REGISTRY' ENTERED AT 11:15:09 ON 28 MAR 2005
L18           50 SEA SUB=L13 SSS SAM L17

     FILE 'LREGISTRY' ENTERED AT 11:17:54 ON 28 MAR 2005
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L19             STRUCTURE L17
                D QUE STAT

     FILE 'REGISTRY' ENTERED AT 11:27:48 ON 28 MAR 2005
                D QUE STAT L18
L20          9588 SEA SUB=L13 SSS FUL L17
                SAV L20 LEE930B/A
                D SAV
L21            23 SEA SUB=L13 SSS SAM L19
L22          1215 SEA SUB=L13 SSS FUL L19
                SAV L22 LEE930C/A
                D SAV
                D QUE STAT

     FILE 'LREGISTRY' ENTERED AT 11:33:56 ON 28 MAR 2005
L23             STR L19

     FILE 'LREGISTRY' ENTERED AT 11:36:07 ON 28 MAR 2005

     FILE 'REGISTRY' ENTERED AT 11:36:18 ON 28 MAR 2005
                D QUE STAT
L24            23 SEA SUB=L13 SSS SAM L23
L25          1206 SEA SUB=L13 SSS FUL L23
                SAV L25 LEE930D/A
                D SAV
                D QUE STAT
                D QUE STAT L13

     FILE 'HCA' ENTERED AT 11:56:46 ON 28 MAR 2005
L26          2500 SEA ABB=ON  PLU=ON  (NEG OR NEGATIVE)(2A)(PHOTORESIST?
                OR PHOTO(A)(RESIST# OR RESIST#))
                E PHOTOACID GENERATOR/CT
                E PHOTOACID/CT
                E PHOTO ACID GENERATOR/CT
                E ACID GENERATOR/CT
                E PHOTOACIDIT
                E PHOTOACID/IT
                E E3+ALL
                E PHOTOACID/CT
L27          3383 SEA ABB=ON  PLU=ON  (PHOTOACID? OR (PHOTO# OR LIGHT# OR
                IRRADIAT?)(2A)ACID#)(2A)GENERAT?
L28         19659 SEA ABB=ON  PLU=ON  PHOTOACID? OR (PHOTO# OR LIGHT# OR
                IRRADIAT?)(2A)ACID#

     FILE 'HCA' ENTERED AT 12:15:34 ON 28 MAR 2005
L29         64190 SEA ABB=ON  PLU=ON  L13
L30            54 SEA ABB=ON  PLU=ON  L29 AND L27
L31           135 SEA ABB=ON  PLU=ON  L29 AND L28
L32            14 SEA ABB=ON  PLU=ON  L26 AND L30
L33            14 SEA ABB=ON  PLU=ON  L26 AND L31
L34            14 SEA ABB=ON  PLU=ON  L32 OR L33
                D L34 1-14 HITSTR
L35         21747 SEA ABB=ON  PLU=ON  L16
L36          5459 SEA ABB=ON  PLU=ON  L20
L37           630 SEA ABB=ON  PLU=ON  L22
L38           629 SEA ABB=ON  PLU=ON  L25
L39            18 SEA ABB=ON  PLU=ON  L27 AND L35
L40             2 SEA ABB=ON  PLU=ON  L27 AND L36
L41             2 SEA ABB=ON  PLU=ON  L27 AND L37
```

```
L42           2 SEA ABB=ON  PLU=ON  L27 AND L38
L43          18 SEA ABB=ON  PLU=ON  (L39 OR L40 OR L41 OR L42)
                D L43 1-18 HITSTR
                D QUE STAT

     FILE 'LREGISTRY' ENTERED AT 12:25:12 ON 28 MAR 2005
L44             STR L19

L45             STR L44

     FILE 'REGISTRY' ENTERED AT 12:34:57 ON 28 MAR 2005
L46          50 SEA SUB=L13 SSS SAM L45
L47        3980 SEA SUB=L13 SSS FUL L45

     FILE 'LREGISTRY' ENTERED AT 12:36:31 ON 28 MAR 2005
L48             STR L47

     FILE 'REGISTRY' ENTERED AT 12:38:01 ON 28 MAR 2005
L49          10 SEA SUB=L13 SSS SAM L48
                D QUE STAT L47
L50         306 SEA SUB=L13 SSS FUL L48

     FILE 'LREGISTRY' ENTERED AT 12:39:59 ON 28 MAR 2005
L51             STR L48

     FILE 'REGISTRY' ENTERED AT 12:40:43 ON 28 MAR 2005
L52           0 SEA SUB=L13 SSS SAM L51
                D QUE STAT
L53          25 SEA SUB=L13 SSS FUL L51
                D SAV
                SAV L47 LEE390E/A
                SAV L50 LEE390F/A
                SAV L53 LEE390G/A

     FILE 'HCA' ENTERED AT 12:44:18 ON 28 MAR 2005
L54        6183 SEA ABB=ON  PLU=ON  L47
L55         123 SEA ABB=ON  PLU=ON  L50
L56          17 SEA ABB=ON  PLU=ON  L53
                D SCAN L56
L57           8 SEA ABB=ON  PLU=ON  L54 AND L28
L58           2 SEA ABB=ON  PLU=ON  L55 AND L28
L59           0 SEA ABB=ON  PLU=ON  L56 AND L28
L60           1 SEA ABB=ON  PLU=ON  L54 AND L26
L61           0 SEA ABB=ON  PLU=ON  L26 AND L55
L62           0 SEA ABB=ON  PLU=ON  L26 AND L56
L63          10 SEA ABB=ON  PLU=ON  L57 OR L58 OR L60
L64          25 SEA ABB=ON  PLU=ON  L63 OR L43
                D QUE STAT
L65          36 SEA ABB=ON  PLU=ON  L64 OR L34
                D QUE STAT L65

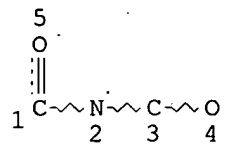
     FILE 'LREGISTRY' ENTERED AT 13:33:08 ON 28 MAR 2005
                D QUE STAT L13
L66             STR L45

     FILE 'REGISTRY' ENTERED AT 13:44:04 ON 28 MAR 2005
L67           0 SEA SUB=L13 SSS SAM L66
                D QUE STAT
L68          50 SEA SUB=L13 SSS FUL L66
```

```
                D SAV
                SAV L68 LEE390H/A
                D SAV

     FILE 'HCA' ENTERED AT 13:47:21 ON 28 MAR 2005
L69           15 SEA ABB=ON  PLU=ON  L68
                D SCAN
                D L69 1-15 TI
L70            0 SEA ABB=ON  PLU=ON  L69 AND L28
L71            0 SEA ABB=ON  PLU=ON  L69 AND L26
                D QUE STAT
                D QUE STAT L56
L72           32 SEA ABB=ON  PLU=ON  L69 OR L56
                D QUE STAT
L73       382336 SEA ABB=ON  PLU=ON  REPROGRAPH?/SC,SX
L74            0 SEA ABB=ON  PLU=ON  L72 AND L73

=> => d que stat l65
L11               STR
```




```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   5

STEREO ATTRIBUTES: NONE
L13       104129 SEA FILE=REGISTRY SSS FUL L11
L14              STR
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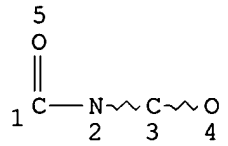


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   5

STEREO ATTRIBUTES: NONE
L16        36454 SEA FILE=REGISTRY SUB=L13 SSS FUL L14
L17              STR
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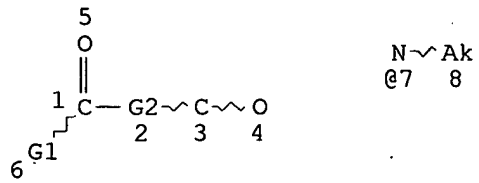
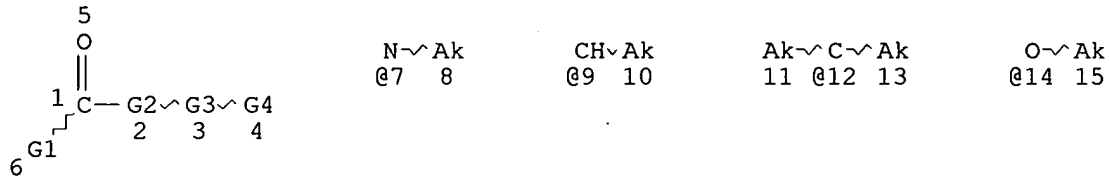


VAR G1=AK/CB
VAR G2=NH/7
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

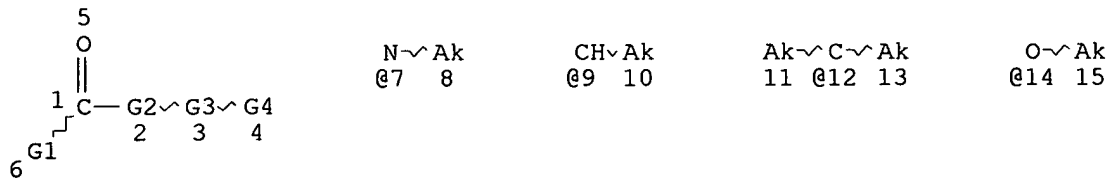
STEREO ATTRIBUTES: NONE
L19 STR



VAR G1=AK/CB
VAR G2=NH/7
VAR G3=CH2/9/12
VAR G4=OH/14
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X50 C AT 8
ECOUNT IS M1-X10 C AT 10
ECOUNT IS M1-X10 C AT 11
ECOUNT IS M1-X10 C AT 13
ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE
L20 9588 SEA FILE=REGISTRY SUB=L13 SSS FUL L17
L22 1215 SEA FILE=REGISTRY SUB=L13 SSS FUL L19
L23 STR

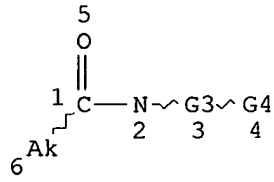


VAR G1=AK/CB

```
VAR G2=NH/7
VAR G3=CH2/9/12
VAR G4=OH/14
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X50 C  AT   8
ECOUNT  IS M1-X6 C  AT  10
ECOUNT  IS M1-X6 C  AT  11
ECOUNT  IS M1-X6 C  AT  13
ECOUNT  IS M1-X6 C  AT  15

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  15

STEREO ATTRIBUTES: NONE
L25         1206 SEA FILE=REGISTRY SUB=L13 SSS FUL L23
L26         2500 SEA FILE=HCA ABB=ON  PLU=ON  (NEG OR NEGATIVE)(2A)(PHOTOR
                 ESIST? OR PHOTO(A)(RESIST# OR RESIST#))
L27         3383 SEA FILE=HCA ABB=ON  PLU=ON  (PHOTOACID? OR (PHOTO# OR
                 LIGHT# OR IRRADIAT?)(2A)ACID#)(2A)GENERAT?
L28        19659 SEA FILE=HCA ABB=ON  PLU=ON  PHOTOACID? OR (PHOTO# OR
                 LIGHT# OR IRRADIAT?)(2A)ACID#
L29        64190 SEA FILE=HCA ABB=ON  PLU=ON  L13
L30           54 SEA FILE=HCA ABB=ON  PLU=ON  L29 AND L27
L31          135 SEA FILE=HCA ABB=ON  PLU=ON  L29 AND L28
L32           14 SEA FILE=HCA ABB=ON  PLU=ON  L26 AND L30
L33           14 SEA FILE=HCA ABB=ON  PLU=ON  L26 AND L31
L34           14 SEA FILE=HCA ABB=ON  PLU=ON  L32 OR L33
L35        21747 SEA FILE=HCA ABB=ON  PLU=ON  L16
L36         5459 SEA FILE=HCA ABB=ON  PLU=ON  L20
L37          630 SEA FILE=HCA ABB=ON  PLU=ON  L22
L38          629 SEA FILE=HCA ABB=ON  PLU=ON  L25
L39           18 SEA FILE=HCA ABB=ON  PLU=ON  L27 AND L35
L40            2 SEA FILE=HCA ABB=ON  PLU=ON  L27 AND L36
L41            2 SEA FILE=HCA ABB=ON  PLU=ON  L27 AND L37
L42            2 SEA FILE=HCA ABB=ON  PLU=ON  L27 AND L38
L43           18 SEA FILE=HCA ABB=ON  PLU=ON  (L39 OR L40 OR L41 OR L42)
L45              STR
```



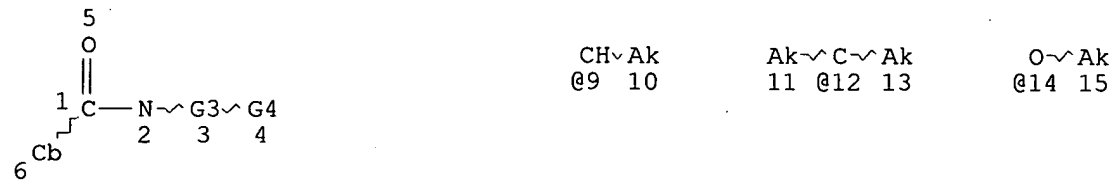

```
                                  CH~Ak       Ak~C~Ak       O~Ak
                                  @9  10       11 @12  13      @14  15
```

```
VAR G3=CH2/9/12
VAR G4=OH/14
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X10 C  AT  10
ECOUNT  IS M1-X10 C  AT  11
ECOUNT  IS M1-X10 C  AT  13
ECOUNT  IS M1-X10 C  AT  15

GRAPH ATTRIBUTES:
```

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L47 3980 SEA FILE=REGISTRY SUB=L13 SSS FUL L45
L48 STR



VAR G3=CH2/9/12
VAR G4=OH/14
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS UNS AT 6
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1-X10 C AT 10
ECOUNT IS M1-X10 C AT 11
ECOUNT IS M1-X10 C AT 13
ECOUNT IS M1-X10 C AT 15

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L50 306 SEA FILE=REGISTRY SUB=L13 SSS FUL L48
L54 6183 SEA FILE=HCA ABB=ON PLU=ON L47
L55 123 SEA FILE=HCA ABB=ON PLU=ON L50
L57 8 SEA FILE=HCA ABB=ON PLU=ON L54 AND L28
L58 2 SEA FILE=HCA ABB=ON PLU=ON L55 AND L28
L60 1 SEA FILE=HCA ABB=ON PLU=ON L54 AND L26
L63 10 SEA FILE=HCA ABB=ON PLU=ON L57 OR L58 OR L60
L64 25 SEA FILE=HCA ABB=ON PLU=ON L63 OR L43
L65 36 SEA FILE=HCA ABB=ON PLU=ON L64 OR L34

=> d l65 1-36 ibib abs hitstr hitind

L65 ANSWER 1 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 142:45902 HCA
TITLE: Compounds bearing tert-butoxycarbonylamino groups as proton scavengers for chemically amplified resists
INVENTOR(S): Sasaki, Yuichi; Kuzuha, Noboru
PATENT ASSIGNEE(S): Eiweiss K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2004345996 A2 20041209 JP 2003-143896 200305 21

PRIORITY APPLN. INFO.: JP 2003-143896 200305 21

OTHER SOURCE(S): MARPAT 142:45902

AB The compds. are are Me3CO2CNHCHYCOXZ [X = O, imino; Y, Z = H, NHCO2CMe3, (carboxyl-, amino-, NHCO2CMe3-substituted) C1-10 alkyl; Y and/or Z = NHCO2CMe3, groups containing NHCO2CMe3; Y ≠ H when X = imino]. The compds. scavenge proton generated in dark reaction during storage, and do not inhibit activity of acids from **photoacid generators** in light exposure

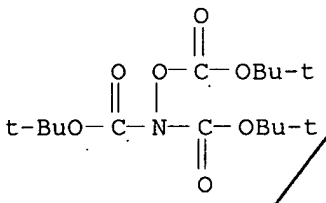
IT **803732-23-2P**

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of compds. bearing tert-butoxycarbonylamino groups as proton scavengers for chemical amplified resists)

RN 803732-23-2 HCA

CN Imidodicarbonic acid, [[(1,1-dimethylethoxy)carbonyl]oxy]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C271-22

ICS C07C271-08; C07C281-02; G03F007-004; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 23, 24, 34

IT 420812-56-2P 803732-19-6P 803732-20-9P 803732-21-0P 803732-22-1P **803732-23-2P**

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of compds. bearing tert-butoxycarbonylamino groups as proton scavengers for chemical amplified resists)

L65 ANSWER 2 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 140:311999 HCA

TITLE: Photosensitive acid generators and photosensitive compositions

INVENTOR(S): Kodama, Kunihiko

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 83 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

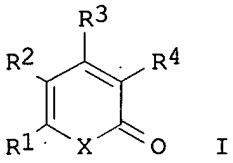
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004099726	A2	20040402	JP 2002-262750	20020909

PRIORITY APPLN. INFO.: JP 2002-262750 20020909

OTHER SOURCE(S): MARPAT 140:311999

GI



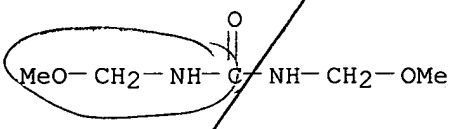
I

AB The disclosed **photoacid generators** are compds. of the formula I (R1-4 = H, alkyl, aryl, halo, alkoxy; ≥ 1 of R1-4 is a substituent having OSO2R end group; R = alkyl, aryl, camphor moiety; X = O, NH, NR5, CHnR5m; R5 =alkyl; n, m = 0, 1, 2; n + m = 2; adjacent two of R1-4 may combine to form rings). The disclosed pos.-working photosensitive composition comprises the **photoacid generator** and an alkali-soluble resin. The disclosed neg.-working photosensitive composition comprises the **photoacid generator**, alkali-soluble resin and acid crosslinking agent. The photosensitive composition exhibit high sensitivity, excellent resolution, and image quality.

IT **141-07-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent for **photoacid generation** type **neg**.-working **photoresist** compns.)

RN 141-07-1 HCA

CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM C09K003-00
ICS C07C309-65; C07C381-12; C07D311-52; G03F007-004; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST **photoacid generator** photoresist compn

IT Photoresists
(**photoacid generating** agents for)

IT **141-07-1** 3089-11-0 4356-60-9 17464-88-9 161679-94-3 162846-57-3 162846-59-5 185502-14-1

RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent for **photoacid generation** type **neg**.-working **photoresist** compns.)

IT 358-23-6 1076-38-6, 4-Hydroxycoumarin 2386-60-9, Butanesulfonyl chloride 6553-96-4, 2,4,6-Triisopropylbenzenesulfonyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(photoresist **photoacid generator** preparation from)

IT 129674-22-2 158593-28-3 177034-73-0 177034-75-2 199432-82-1
200808-68-0 228101-60-8 252570-52-8 288620-13-3 288620-15-5
289706-85-0 325143-38-2 326591-96-2 372968-15-5 503003-65-4
RL: TEM (Technical or engineered material use); USES (Uses)
(resin for **photoacid generation** type **neg**.-working **photoresist** compns.)

IT 24979-69-9 24979-70-2 143336-94-1 185405-14-5 250378-10-0
289623-64-9 312620-54-5 321164-59-4 345212-27-3 359635-35-1
366808-82-4 370102-83-3 370866-39-0 391232-36-3 391613-77-7
398140-43-7 398140-45-9 398140-54-0 398140-57-3 398140-59-5
398140-68-6 398140-69-7 398140-77-7 398140-80-2 406702-00-9
430437-18-6 459418-30-5 482609-97-2 515876-73-0 515876-74-1
521303-15-1 521303-16-2 574735-94-7 607710-65-6 607710-66-7
607710-68-9 607710-71-4 607710-72-5 607710-73-6 607710-76-9
607710-77-0 608140-58-5 610300-96-4 610300-97-5 610300-98-6
610301-01-4 610301-04-7 610301-05-8 615278-35-8 676515-85-8
676515-86-9 676515-87-0 676515-88-1 676515-89-2 676515-90-5
676515-91-6 676515-93-8
RL: TEM (Technical or engineered material use); USES (Uses)
(resin for **photoacid generation** type photoresist compns.)

L65 ANSWER 3 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 140:207467 HCA
TITLE: Negative resist composition
INVENTOR(S): Yasunami, Shoichiro; Shirakawa, Koji
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 43 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

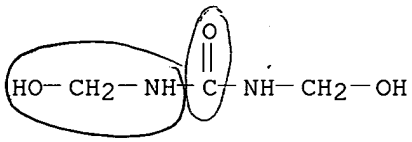
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004033441	A1	20040219	US 2003-642291	20030818
JP 2004077810	A2	20040311	JP 2002-238157	20020819
PRIORITY APPLN. INFO.:			JP 2002-238157 A	20020819

AB A neg. resist composition of the present invention comprises: (A) an alkali-soluble resin; (B-1) a crosslinking agent capable of crosslinking with the alkali-soluble resin (A) by the action of an acid, in which the crosslinking agent is a phenol compound containing: in the mol. one or more benzene rings; and at least two crosslinking

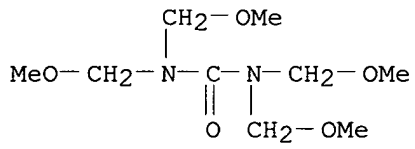
groups bonded to any of the benzene rings, the crosslinking group being a group selected from the group consisting of a hydroxymethyl group, an alkoxymethyl group and an acyloxymethyl group; (B-2) a crosslinking agent capable of crosslinking with the alkali-soluble resin (A) by the action of an acid, in which the crosslinking agent contains at least two specific groups; and (C) a compound capable of **generating** an **acid** upon **irradiation** with an actinic ray or radiation.

IT **140-95-4 112288-39-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(cross linking agent; **neg. photoresist** composition containing)

RN 140-95-4 HCA
CN Urea, N,N'-bis(hydroxymethyl)- (9CI) (CA INDEX NAME)



RN 112288-39-8 HCA
CN Urea, tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
NCL 430270100; 430302000
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
ST **neg photoresist** compn photolithog
IT **Negative photoresists**
(**neg. photoresist** composition)
IT Photolithography
(**neg. photoresist** composition for)
IT 1886-74-4 137309-10-5 144317-44-2 153698-46-5 171417-91-7 258341-98-9 270563-96-7 312386-77-9 328006-70-8 543700-40-9 660859-78-9 660859-79-0
RL: TEM (Technical or engineered material use); USES (Uses)
(acid generator; **neg. photoresist** composition containing)
IT 161679-94-3P 184877-60-9P 185502-14-1P 197087-74-4P 421546-91-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cross linking agent; **neg. photoresist** composition containing)
IT **140-95-4** 4211-44-3 4356-60-9 17464-88-9 70587-55-2 **112288-39-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(cross linking agent; **neg. photoresist** composition containing)
IT 173786-80-6P, 4-Acetoxystyrene-4-methoxystyrene copolymer
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)
(**neg. photoresist** composition containing)

IT 29420-49-3, Potassium nonafluorobutanesulfonate 660859-77-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of acid generator for **neg. photoresist** composition)

IT 110726-28-8, 1[α-Methyl-α-(4-hydroxyphenyl)ethyl]-4-[(α,α-bis(4-hydroxyphenyl)ethyl]benzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cross linking agent for **neg. photoresist** composition)

IT 162846-57-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cross linking agent for **neg. photoresist** composition)

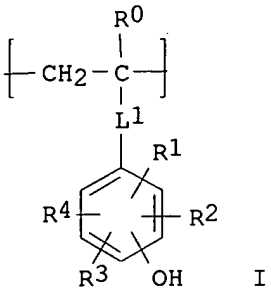
IT 24979-69-9 24979-70-2 24979-74-6 31853-85-7 149614-53-9 171429-59-7 185405-14-5 321164-59-4 345212-27-3 345212-56-8 349619-68-7
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(resin; **neg. photoresist** composition containing)

L65 ANSWER 4 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 140:119872 HCA
TITLE: Negative-working resist composition
INVENTOR(S): Takahashi, Akira; Adekawa, Yutaka; Yasunami, Shoichiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 74 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004020735	A2	20040122	JP 2002-173071	20020613

PRIORITY APPLN. INFO.: JP 2002-173071 20020613

GI



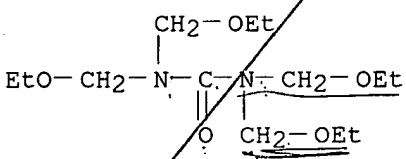
I

AB The composition contains (A) a compound generating an acid by actinic ray or radiation, (B) a crosslinking agent which crosslinks by the action of the acid and (C) an alkali-soluble polymer having repeating units I (R0 = H, halo, alkyl; L1 = bond, divalent linkage; R1-4 = alkyl, alkoxy, acetoxy, acyl, OH, thiol, halo, acid decomposable group, H; the benzene ring has ≥1 OH group whose o-position is not H) and CH2CR20(L2M) (R20 = H, halo, alkyl; L2 =bond, divalent linkage; M = group inhibiting alkali-solubility in non-exposed area). The composition shows high sensitivity especially to x-ray and electron beam, dissoln. resistance to developer, and is useful for lithog.

IT **508220-71-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; neg. resist composition containing acid generator, crosslinking agent, and alkali-soluble resin)

RN 508220-71-1 HCA

CN Urea, tetrakis(ethoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
ICS C08F212-14; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST neg resist **photoacid generator** crosslinking agent; alkali soluble resin electron bean resist lithog

IT 5395-50-6 13747-15-4 17464-88-9 508220-69-7
508220-71-1 547744-08-1 625121-00-8
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; neg. resist composition containing acid generator, crosslinking agent, and alkali-soluble resin)

L65 ANSWER 5 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 140:67637 HCA
TITLE: Proton neutralizing agents for chemically amplified resists showing long pot life
INVENTOR(S): Kuzuha, Noboru
PATENT ASSIGNEE(S): Aibaitsu K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004002225	A2	20040108	JP 2002-159636	200205 31

PRIORITY APPLN. INFO.: JP 2002-159636 200205 31

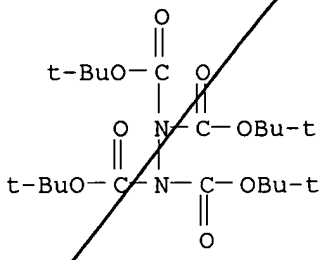
OTHER SOURCE(S): MARPAT 140:67637

AB The agents bear ≥2 tert-butoxycarbonyl groups. The agents suppress reactions of the resists with proton generated by decomposition of **photoacid generators** before light exposure and do not inhibit the reactions on light exposure.

IT **121561-55-5**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(proton neutralizing agents bearing tert-butoxycarbonyl groups for chemical amplified resists showing long pot life)

RN 121561-55-5 HCA

CN Hydrazinetetracarboxylic acid, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C271-20
ICS C07C281-02; H01L021-30

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 23, 25

IT 1333-74-0, Hydrogen, uses
RL: CAT (Catalyst use); USES (Uses)
(**generated** from **photoacid generators**
; proton neutralizing agents bearing tert-butoxycarbonyl groups for chemical amplified resists showing long pot life)

IT 16466-61-8 **121561-55-5**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(proton neutralizing agents bearing tert-butoxycarbonyl groups for chemical amplified resists showing long pot life)

L65 ANSWER 6 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 139:343479 HCA
TITLE: Sulfonium compounds as radiation-sensitive acid

generators and resist compositions containing them
INVENTOR(S): Kodama, Kunihiko
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 66 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003307839	A2	20031031	JP 2002-112372	200204 15

PRIORITY APPLN. INFO.: JP 2002-112372 200204 15

OTHER SOURCE(S): MARPAT 139:343479

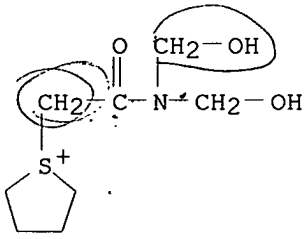
AB (Ba)mAaS+Y1Y2 X- (I; Y1, Y2 = alkyl, aryl, aralkyl, heterocyclyl, oxoalkyl, oxoaralkyl; Y1 and Y2 may be bonded together to form a ring; Aa = direct bond, organic group; Ba = group having CONRa or SO2NRa; Ra = H, alkyl; m = 1-3; X- = nonnucleophilic anion), which **generate acids** upon **irradiation** with actinic ray or radiation, are claimed. Also claimed are resist compns. containing I, pos.-working resist compns. containing I and resins which are decomposed by acids to show increased solubility to an alkaline developer, neg.-working resist compns. containing I, water-insol. alkali-soluble resins, and crosslinking agents which crosslink to the alkali-soluble resins by acids, etc. The resist compns. containing I show high sensitivity, resolution, and good profile, and are especially suitable for irradiation with far-UV and electron beam.

IT **617692-38-3**
RL: CAT (Catalyst use); USES (Uses)
(preparation of sulfonium compds. having amide or sulfonamide linkage as radiation-sensitive acid generators and resist compns. containing them)

RN 617692-38-3 HCA
CN Thiophenium, 1-[2-[bis(hydroxymethyl)amino]-2-oxoethyl]tetrahydro-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 617692-37-2
CMF C8 H16 N O3 S



CM 2

CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

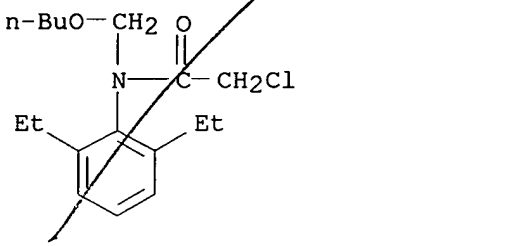
IC ICM G03F007-004
ICS C07C381-12; C08F012-14; C08F220-18; C08F220-26; C08F232-04; C09K003-00; G03F007-038; G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST amide linkage contg sulfonium salt **photoacid generator** resist; sulfonamide linkage contg sulfonium salt **photoacid generator** resist
IT 617692-21-4 617692-22-5 617692-23-6 617692-24-7 617692-25-8
617692-26-9 617692-27-0 617692-29-2 617692-31-6 617692-33-8
617692-34-9 617692-36-1 **617692-38-3** 617692-40-7
617692-42-9 617692-44-1 617692-46-3 617692-47-4 617692-49-6
617692-51-0 617692-53-2 617692-55-4 617692-57-6
RL: CAT (Catalyst use); USES (Uses)
(preparation of sulfonium compds. having amide or sulfonamide linkage as radiation-sensitive acid generators and resist compns. containing them)

L65 ANSWER 7 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 136:97849 HCA
TITLE: Light, extruded agricultural compositions containing a ceramic carrier for water surface application in paddy fields
INVENTOR(S): Takayanagi, Norikazu; Kimpara, Masaomi; Suzuki, Munehiro
PATENT ASSIGNEE(S): American Cyanamid Co., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6340656	B1	20020122	US 2000-501554	200002 09
PRIORITY APPLN. INFO.:			US 1999-119650P P	199902 11

AB The light, extruded compns. comprise at least one agricultural compound a light, extrudable, ceramic carrier, and at least one surface active agent. The composition may further comprise a mineral carrier and a binder. The composition is used for applying agricultural compds. to the water of paddy rice fields by localized application(s). Light, extruded pesticidal compns. containing a ceramic carrier for water surface application in paddy fields.

IT **23184-66-9**, Butachlor
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded agricultural compns. containing ceramic carrier for water surface application in paddy fields)
RN 23184-66-9 HCA
CN Acetamide, N-(butoxymethyl)-2-chloro-N-(2,6-diethylphenyl)- (9CI) (CA INDEX NAME)



IC ICM A01N025-08
NCL 504367000
CC 5-4 (Agrochemical Bioregulators)
IT 87-41-2, PhThalide 133-06-2, Captan 1897-45-6, TPN 6980-18-3, Kasugamycin 14698-29-4, Oxolinic **acid** 17109-49-8, Edifenphos 17804-35-2, Benomyl 23564-05-8, Thiophanate-methyl 26087-47-8, Iprobenfos 27605-76-1, Probenazole 36734-19-7, Iprodione 41814-78-2, Tricyclazole 50512-35-1, Isoprothiolane 50642-14-3, Validamycin 55814-41-0, Mepronil 57369-32-1, Pyroquilon 57837-19-1, Metalaxyl 62865-36-5, Diclomezine 66063-05-6, Pencycuron 66332-96-5, Flutolanil 68694-11-1, Triflumizole 76280-91-6, Tecloftalam 89269-64-7, Ferimzone 115852-48-7, Fenoxanil 133408-50-1, Metominostrobin
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fungicide in **light**, extruded agricultural compns. containing ceramic carrier for water surface application in paddy fields)
IT 94-11-1 94-74-6, MCPA 94-75-7, 2,4-D, biological studies 94-80-4 94-81-5, MCPB 102-71-6, Trolamine, biological studies 709-98-8, Propanil 1014-70-6, Simetryn 1713-12-8, MCPA-butyl 1713-15-1 1836-77-7, Chlornitrofen 1918-13-4, Chlorthiamid 1918-18-9, Swep 1928-43-4, 2,4-D 2-Ethylhexyl ester 2008-39-1 2039-46-5 2212-67-1, Molinate 2453-96-5, MCPCA 2702-72-9, 2,4-D Sodium salt 3653-48-3 5221-16-9 5742-19-8, 2,4-D Diolamine 6062-26-6 7287-19-6, Prometryn 10443-70-6, MCPB-ethyl 14214-89-2 19666-30-9, Oxadiazon 22936-75-0, Dimethametryn **23184-66-9**, Butachlor 24151-93-7, Piperophos 25057-89-0, Bentazone 25168-26-7 26544-20-7, MCPA-isooctyl 28249-77-6, Thiobencarb 32861-85-1, Chlormethoxynil 40487-42-1, Pendimethalin 42576-02-3, Bifenox 42609-52-9, Dymron 51218-49-6, Pretilachlor 52570-16-8, Naproanilide 58011-68-0, Pyrazolate 61432-55-1, Dimepiperate 71561-11-0, Pyrazoxyfen 72731-35-2 73250-68-7, Mefenacet 74712-19-9, Bromobutide 79540-50-4, Etobenzanid 82692-44-2, Benzofenap 83055-99-6, Bensulfuron-methyl 84496-56-0, Clomeprop 85785-20-2, Esprocarb 87818-31-3, Cinmethylin 88678-67-5, Pyributicarb 93697-74-6, Pyrazosulfuron-ethyl 94593-91-6, Cinosulfuron 96491-05-3, Thenylchlor 97886-45-8, Dithiopyr 110956-75-7, Pentoxazone 120162-55-2, Azimsulfuron 122008-85-9, Cyhalofop-butyl 122548-33-8, Imazosulfuron 125306-83-4, Cafenstrole 126801-58-9, Ethoxysulfuron 136849-15-5,

Cyclosulfamuron 153197-14-9, Oxaziclomefone 158237-07-1, Fentrazamide 188061-45-2, Cyclosulfamuron sodium salt 288301-74-6
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded agricultural compns. containing ceramic carrier for water surface application in paddy fields)

IT 98-11-3D, Benzenesulfonic acid, alkyl derivs. 108-95-2D, Phenol, sulfonates 110-15-6D, Butanedioic acid, dialkyl, sulfo- derivs., uses 1321-69-3D, alkyl derivs. 7664-93-9D, Sulfuric acid, alkyl derivs. 7664-93-9D, Sulfuric acid, alkyl esters 7758-29-4, Sodium tripolyphosphate 8062-15-5, Lignosulfonic **acid** 9008-63-3 9017-33-8 9017-33-8D, alkyl derivs. 13478-98-3, Hexametaphosphate 16005-17-7, Acetylene glycol 25155-19-5D, Naphthalenesulfonic acid, alkyl derivs. 25322-68-3D, alkyl aryl ether 25322-68-3D, alkyl aryl ether phosphate 25322-68-3D, alkyl aryl ether sulfate 25322-68-3D, alkyl ether 25322-68-3D, alkyl ether phosphate 25322-68-3D, alkyl ether sulfate
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant in **light**, extruded agricultural compns. containing ceramic carrier for water surface application in paddy fields)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 8 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 134:302931 HCA
TITLE: Cyclocopolymer of N-cyclohexyldimethacrylamide and application to a photoresist with **photoacid generator**
AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara, Shigeru; Yamaoka, Tsuguo
CORPORATE SOURCE: Department of Information and Image sciences, Faculty of Engineering, Chiba University, Chiba, 263-8522, Japan
SOURCE: Journal of Photopolymer Science and Technology (2000), 13(5), 703-709
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

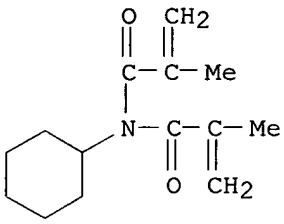
AB The cyclized copolymers from N-cyclohexyldimethacrylamide (CHDMA) with tert-Bu methacrylate (Me3CMA) or tetrahydropyranyl methacrylate (THPMA) were synthesized. The copolymn. occurred by general technique of radical polymerization and CHDMA mainly proceeded the cyclized reaction. The copolymers have high transmittance at 248 nm. These copolymers indicated high thermal property due to the cyclic structure in the main chain. The ester unit of the side chain was easily cleaved by baking with acid catalyst. The acid reaction was dependent on a number of methacrylate units and a kind of ester group. However, the cyclized unit from CHDMA was no changed on this process. The authors applied these copolymers to photoresist based on the chemical amplified system with PAG and obtained patterns of pos.-tone image.

IT **334756-54-6P 334756-55-7P 334756-63-7P**
RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(synthesis of cyclopolymer of N-cyclohexyldimethacrylamide for use as deep-UV chemical-amplified photoresist)

RN 334756-54-6 HCA
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-2-propenamide (9CI) (CA INDEX NAME)

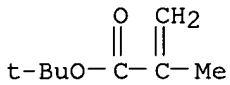
CM 1

CRN 334756-53-5
CMF C14 H21 N O2



CM 2

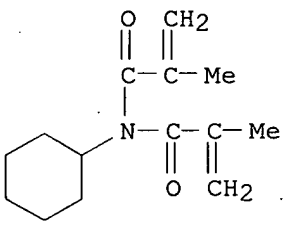
CRN 585-07-9
CMF C8 H14 O2



RN 334756-55-7 HCA
CN 2-Propenoic acid, 2-methyl-, polymer with N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-2-propenamide (9CI) (CA INDEX NAME)

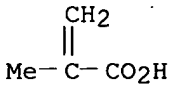
CM 1

CRN 334756-53-5
CMF C14 H21 N O2



CM 2

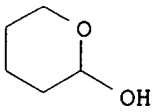
CRN 79-41-4
CMF C4 H6 O2



RN 334756-63-7 HCA
CN 2-Propenoic acid, 2-methyl-, polymer with N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-2-propenamide, tetrahydro-2H-pyran-2-yl ester (9CI) (CA INDEX NAME)

CM 1

CRN 694-54-2
CMF C5 H10 O2

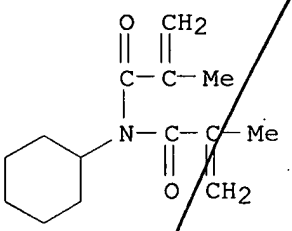


CM 2

CRN 334756-55-7
CMF (C14 H21 N O2 . C4 H6 O2)x
CCI PMS

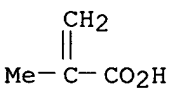
CM 3

CRN 334756-53-5
CMF C14 H21 N O2



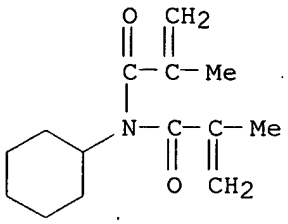
CM 4

CRN 79-41-4
CMF C4 H6 O2



IT **334756-53-5P**
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of cyclopolymer of N-cyclohexyldimethacrylamide for

use as deep-UV chemical-amplified photoresist using)
RN 334756-53-5 HCA
CN 2-Propenamide, N-cyclohexyl-2-methyl-N-(2-methyl-1-oxo-2-propenyl)-(9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35
ST cyclocopolymer cyclohexyl dimethacrylamide photoresist **photoacid generator**
IT **334756-54-6P 334756-55-7P 334756-63-7P**
RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); POF (Polymer in formulation); PREP (Preparation); USES (Uses)
(synthesis of cyclopolymer of N-cyclohexyldimethacrylamide for use as deep-UV chemical-amplified photoresist)
IT 2918-67-4P, N-Cyclohexyl methacrylamide **334756-53-5P**
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of cyclopolymer of N-cyclohexyldimethacrylamide for use as deep-UV chemical-amplified photoresist using)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 9 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 133:288701 HCA
TITLE: Synthesis of cyclized copolymer from N-substituted dimethacrylamide and application to a photoresist with a **photoacid generator**
AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara, Shigeru; Yamaoka, Tsuguo
CORPORATE SOURCE: Department of Information and Image sciences, Faculty of Engineering, Chiba University, Chiba, 263-8522, Japan
SOURCE: Journal of Photopolymer Science and Technology (2000), 13(2), 207-210
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB N-phenyldimethacrylamide and tert-Bu methacrylate were radically polymerized in solution The copolymer has a five-membered imide ring and a high Tg. The copolymer composition can be optionally obtained. The authors applied the polymer with a **photoacid generator** to a photoresist based on the chemical-amplified system. The properties of these polymers were satisfactory in the deep-UV region. Good images were obtained from these components.
IT **300343-89-9P**

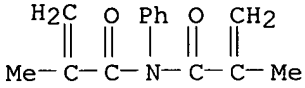
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(synthesis of cyclized polymer from N-substituted dimethacrylamide for photoresists)

RN 300343-89-9 HCA

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide (9CI) (CA INDEX NAME)

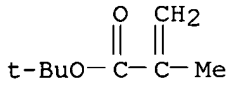
CM 1

CRN 7370-86-7
CMF C14 H15 N O2



CM 2

CRN 585-07-9
CMF C8 H14 O2



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35

ST cyclized copolymer dimethacrylamide butyl methacrylate photoresist **photoacid generator** polymn

IT **300343-89-9P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(synthesis of cyclized polymer from N-substituted dimethacrylamide for photoresists)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 10 OF 36 HCA COPYRIGHT 2005 ACS on STN

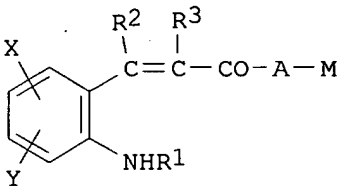
ACCESSION NUMBER: 133:252737 HCA
TITLE: Preparation of caged amino acids
INVENTOR(S): Shiono, Hirofumi
PATENT ASSIGNEE(S): Bunshi Bio Photonics Kenkyusho K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 96 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2000264868	A2	20000926	JP 2000-1702	200001 07
US 6329546	B1	20011211	US 2000-480458	200001 11
PRIORITY APPLN. INFO.:			JP 1999-5660 A	199901 12

OTHER SOURCE(S): MARPAT 133:252737

GI



I

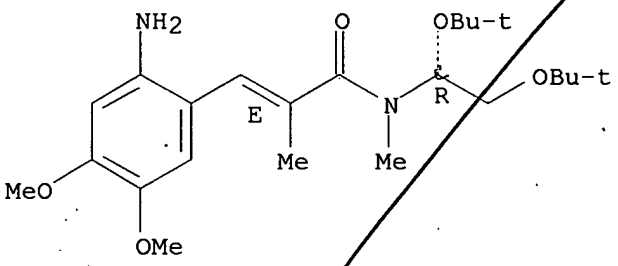
AB Title compds. I (X, Y = H, halo, C1-4 alkyl, C1-4 alkyloxy, C1-4 alkylamino, benzo; R1-R3 = H, C1-4 alkyl; A = amino acid residue selected from Gly, Ala, Val, Leu, Ile, Ser, Thr, etc.; M = H, alkali metals, alkaline earth metal). (E)-3-[4,5-dimethoxy-2-(trimethylsilylethoxycarbonyl)aminophenyl]-2-methyl-2-propenoic acid was reacted with glutamine tert-Bu ester hydrochloride in the presence of ClCO2Bu-iso and N-methylmorpholine in THF at room temperature for 1 h to give 73.9% (E)-N-glutamine tert-Bu ester 3-(2-amino-4,5-dimethoxyphenyl)-2-methyl-2-propenoic acid amide, which was reacted with F3CCO2H in CH2Cl2 at 30° for 24 h to give 93.8% (E)-N-L-glutamine 3-(2-amino-4,5-dimethoxyphenyl)-2-methyl-2-propenamide, which released glutamic **acid** when **irradiated** with light.

IT **296231-19-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of caged amino acids)

RN 296231-19-1 HCA

CN 2-Propenamide, 3-(2-amino-4,5-dimethoxyphenyl)-N-[(1R)-1,2-bis(1,1-dimethylethoxy)ethyl]-N,2-dimethyl-, (2E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



IC ICM C07C237-20
ICS A61K031-197; A61K031-198; C07C233-46; G01N033-68
CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 9
IT 70249-96-6P 103260-74-8P 113387-36-3P 296230-57-4P
296230-58-5P 296230-59-6P 296230-60-9P 296230-61-0P
296230-62-1P 296230-63-2P 296230-64-3P 296230-65-4P
296230-66-5P 296230-67-6P 296230-68-7P 296230-69-8P
296230-70-1P 296230-71-2P 296230-72-3P 296230-76-7P
296230-77-8P 296230-80-3P 296230-81-4P 296230-82-5P
296230-86-9P 296230-88-1P 296230-90-5P 296230-93-8P
296230-95-0P 296230-99-4P 296231-00-0P 296231-01-1P
296231-02-2P 296231-03-3P 296231-04-4P 296231-06-6P
296231-08-8P 296231-10-2P 296231-12-4P 296231-14-6P
296231-16-8P **296231-19-1P** 296231-20-4P 296231-21-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation of caged amino acids)

L65 ANSWER 11 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 133:173420 HCA
TITLE: Light, extruded pesticidal compositions containing a ceramic carrier for water surface application in paddy fields
INVENTOR(S): Takayanagi, Norikazu; Kimpara, Masaomi; Suzuki, Munehiro
PATENT ASSIGNEE(S): American Cyanamid Company, USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000047044	A1	20000817	WO 2000-US3073	20000207

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2361532	AA	20000817	CA 2000-2361532	20000207
AU 2000029833	A5	20000829	AU 2000-29833	20000207
AU 768396	B2	20031211		
BR 2000008120	A	20011106	BR 2000-8120	20000207
EP 1150562	A1	20011107	EP 2000-908506	20000207
EP 1150562	B1	20040428		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002536385	T2	20021029	JP 2000-598004	20000207
NZ 513715	A	20030530	NZ 2000-513715	20000207
AT 265137	E	20040515	AT 2000-908506	20000207
PT 1150562	T	20040730	PT 2000-908506	20000207
ES 2219315	T3	20041201	ES 2000-908506	20000207
EG 22636	A	20030531	EG 2000-147	20000208
TW 557199	B	20031011	TW 2000-89102180	20000210
BG 105862	A	20020531	BG 2001-105862	20010831
ZA 2001007438	A	20021217	ZA 2001-7438	20010910
PRIORITY APPLN. INFO.:			US 1999-248859 A	19990211
			WO 2000-US3073 W	20000207

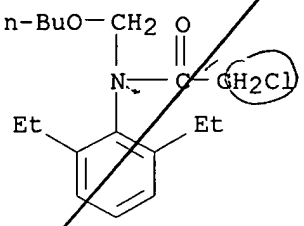
AB The light, extruded compns. comprise a pesticide, a light, extrudable, ceramic carrier and at least one surface active agent, and, optionally, a mineral carrier and a binder. The compds. are used for applying pesticides to the water surface of paddy rice fields.

IT **23184-66-9**, Butachlor

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded pesticidal compns. containing ceramic carrier for water surface application)

RN 23184-66-9 HCA

CN Acetamide, N-(butoxymethyl)-2-chloro-N-(2,6-diethylphenyl)- (9CI) (CA INDEX NAME)



IC ICM A01N025-08

CC 5-4 (Agrochemical Bioregulators)

IT 133-06-2, Captan 1897-45-6, TPN 6980-18-3, Kasugamycin 14698-29-4, Oxolinic **acid** 17109-49-8, Edifenphos 17804-35-2, Benomyl 19408-46-9, Kasugamycin hydrochloride 23564-05-8, Thiophanatemethyl 26087-47-8, Iprobenfos 27355-22-2, Fthalide 27605-76-1, Probenazole 36734-19-7, Iprodione 41814-78-2, Tricyclazole 50512-35-1, Isoprothiolane 50642-14-3, Validamycin 55814-41-0, Mepronil 57369-32-1, Pyroquilone 57837-19-1, Metalaxyl 62865-36-5, Diclomezine 66063-05-6, Pencycuron 66332-96-5, Flutolanil 68694-11-1, Triflumizole 76280-91-6, Tecloftalam 89269-64-7, Ferimzone 115852-48-7 133408-50-1, Metominostrobin
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(fungicide in **light**, extruded pesticidal compns. containing ceramic carrier for water surface application)

IT 94-11-1 94-74-6, MCPA 94-75-7, 2,4-D, biological studies 94-80-4 709-98-8, Propanil 1014-70-6, Simetryn 1713-12-8 1713-15-1 1836-77-7, Chlornitrofen 1918-13-4, Chlorthiamid 1918-18-9, Swep 1928-43-4 2008-39-1 2039-46-5 2212-67-1, Molinate 2453-96-5, MCPCA 2569-01-9 2702-72-9 3653-48-3 5221-16-9 5742-19-8 7287-19-6, Prometryn 14214-89-2 19666-30-9, Oxadiazon 22936-75-0, Dimethametryn **23184-66-9**, Butachlor 24151-93-7, Piperophos 25057-89-0, Bentazone 25168-26-7 26544-20-7, MCPA-isooctyl 28249-77-6, Thiobencarb 32861-85-1, Chlormethoxynil 40487-42-1, Pendimethalin 42576-02-3, Bifenox 42609-52-9, Dymron 51218-49-6, Pretilachlor 52570-16-8, Naproanilide 58011-68-0, Pyrazolate 61432-55-1, Dimepiperate 71561-11-0, Pyrazoxyfen 72731-35-2 73250-68-7, Mefenacet 74712-19-9, Bromobutide 79540-50-4, Etobenzanid 82692-44-2, Benzofenap 83055-99-6, Bensulfuronmethyl 84496-56-0, Clomeprop 85785-20-2, Esprocarb 87818-31-3, Cinmethylin 88678-67-5, Pyributicarb 93697-74-6, Pyrazosulfuronethyl 94593-91-6, Cinosulfuron 96491-05-3, Thenylchlor 97886-45-8, Dithiopyr 110956-75-7, Pentoxazone 120162-55-2, Azimsulfuron 122008-85-9, Cyhalofopbutyl 122548-33-8, Imazosulfuron 125306-83-4, Cafenstrole 126801-58-9, Ethoxysulfuron 136849-15-5, Cyclosulfamuron 153197-14-9, Oxaziclomefone 158237-07-1, Fentrazamide 188061-45-2 288301-74-6
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(herbicide in light, extruded pesticidal compns. containing ceramic carrier for water surface application)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 12 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 133:142534 HCA
TITLE: Synthesis of a self-crosslinking polymer and its application in water-developable chemically amplified **negative photoresist**
AUTHOR(S): Chen, Qi-Dao; Chen, Ming; Lin, Tian-Shu; Hong, Xiao-Yin; Huang, Zhi-Qi; Hu, De-Fu
CORPORATE SOURCE: Department of Chemistry, Tsinghua University, Beijing, 100084, Peop. Rep. China
SOURCE: Ganguang Kexue Yu Guang Huaxue (2000), 18(2), 155-159
CODEN: GKKHE9; ISSN: 1000-3231
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

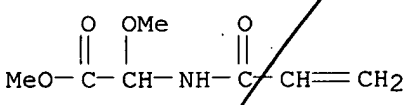
AB A new kind of acid-sensitive polymer with Tg = 95°C and Mn = 7,625, Mw = 25,013 (Mw/Mn = 3.28) was synthesized by the co-polymerization of styrene, N-(4-hydroxyphenyl) maleimide and methylacrylamidoglycolate methylether(MAGME). This MAGME containing co-polymer can be self-crosslinked via acid-catalyzed condensation reaction when heated. A new kind of chemical amplified **neg. photoresist** without crosslinking agent was studied using this co-polymer as the base resin, which was developable in harmless NaOH-H2O solution Diaryliodonium hexafluorophosphate was used in the photoresist as the **photo-acid generator** to supply the strong acid and phenothiazine was the photosensitizer. The condition of photolithog. was preliminarily investigated.

IT **286477-89-2DP**, hydrolyzed
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg. photoresist**)

RN 286477-89-2 HCA
CN Acetic acid, methoxy[(1-oxo-2-propenyl)amino]-, methyl ester, polymer with 1-[4-(acetyloxy)phenyl]-1H-pyrrole-2,5-dione and ethenylbenzene (9CI) (CA INDEX NAME)

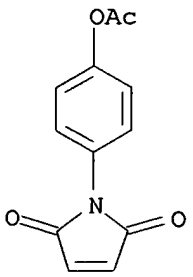
CM 1

CRN 77402-03-0
CMF C7 H11 N O4



CM 2

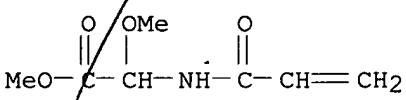
CRN 6637-46-3
CMF C12 H9 N O4



CM 3

CRN 100-42-5
CMF C8 H8

IT **77402-03-0**, Methylacrylamidoglycolate methylether
RL: RCT (Reactant); RACT (Reactant or reagent)
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg**. **photoresist**)
RN 77402-03-0 HCA
CN Acetic acid, methoxy[(1-oxo-2-propenyl)amino]-, methyl ester (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38, 76
ST crosslinking polymer water developable chem amplified **neg** **photoresist**
IT Photoresists
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg**. **photoresist**)
IT Polymerization
(condensation; Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg**. **photoresist**)
IT 92-84-2, Phenothiazine 61358-25-6
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg**. **photoresist**)
IT **286477-89-2DP**, hydrolyzed
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Synthesis of self-crosslinking polymer and application in

water-developable chemical amplified **neg.** **photoresist**)

IT 100-42-5, Styrene, reactions 108-31-6, 2,5-Furandione, reactions 123-30-8, 4-Aminophenol 7300-91-6, N-(4-Hydroxyphenyl) maleimide **77402-03-0**, Methylacrylamidoglycolate methylether
RL: RCT (Reactant); RACT (Reactant or reagent)
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg.** **photoresist**)

IT 6637-46-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg.** **photoresist**)

IT 1310-73-2, Sodium hydroxide, uses 7732-18-5, Water, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(Synthesis of self-crosslinking polymer and application in water-developable chemical amplified **neg.** **photoresist**)

L65 ANSWER 13 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 132:286212 HCA
TITLE: Cyclized copolymer of methacrylic anhydride and an application to photoresist with **photoacid generator**
AUTHOR(S): Takao, Yasuyuki; Miyagawa, Nobukazu; Takahara, Shigeru; Yamaoka, Tsuguo
CORPORATE SOURCE: Department of Information and Image science, Faculty of Engineering, Chiba University, Chiba, 263-8522, Japan
SOURCE: Journal of Photopolymer Science and Technology (1999), 12(5), 769-772
CODEN: JSTEEW; ISSN: 0914-9244
PUBLISHER: Technical Association of Photopolymers, Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

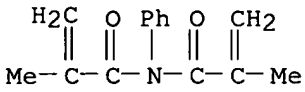
AB The cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide and methacrylonitrile was carried out. The polymer consists of six-membered cyclic acid anhydride and five-membered imide ring. The cyclic acid anhydride was hydrolized by generated acid catalyst from **photoacid generator** (PAG). The hydrolyzed copolymer is dissolved in an alkaline solution The authors applied this copolymer with PAG to photoresist based on the chemical amplified system and obtained good patterns of pos.-tone image.

IT **263896-37-3P**, Methacrylic anhydride-methacrylonitrile-N-phenyldimethacrylamide copolymer
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to chemical amplification photoresists)

RN 263896-37-3 HCA
CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide and 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

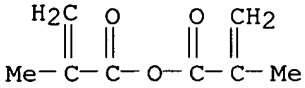
CM 1

CRN 7370-86-7
CMF C14 H15 N O2



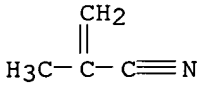
CM 2

CRN 760-93-0
CMF C8 H10 O3



CM 3

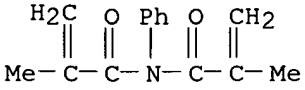
CRN 126-98-7
CMF C4 H5 N



IT **263896-39-5P**, Methacrylic anhydride-N-phenyldimethacrylamide copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of resists for photolithog. applications)
RN 263896-39-5 HCA
CN 2-Propenoic acid, 2-methyl-, anhydride, polymer with 2-methyl-N-(2-methyl-1-oxo-2-propenyl)-N-phenyl-2-propenamide (9CI) (CA INDEX NAME)

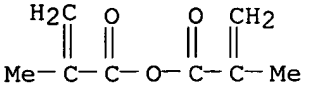
CM 1

CRN 7370-86-7
CMF C14 H15 N O2



CM 2

CRN 760-93-0
CMF C8 H10 O3



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Photoresists
(chemical amplification; cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to photoresist with **photoacid generator**)

IT **263896-37-3P**, Methacrylic anhydride-methacrylonitrile-N-phenyldimethacrylamide copolymer
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(cyclized copolymer of methacrylic anhydride its acid-induced reaction and its application to chemical amplification photoresists)

IT **263896-39-5P**, Methacrylic anhydride-N-phenyldimethacrylamide copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(cyclized copolymn. of methacrylic anhydride with N-phenyldimethacrylamide in design of resists for photolithog. applications)

IT 104-15-4, 4-Toluenesulfonic acid, uses
RL: CAT (Catalyst use); USES (Uses)
(thermal reaction of cyclized copolymer of methacrylic anhydride with acid catalyst in relation to its application to photoresist with **photoacid generator**)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 14 OF 36 HCA COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:187644 HCA

TITLE: Polymer, chemically amplified negative-working resist containing same, and resist pattern formation

INVENTOR(S): Iwasa, Shigeyuki; Maeda, Katsumi; Nakano, Kaichiro; Hasegawa, Etsuo

PATENT ASSIGNEE(S): NEC Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000063433	A2	20000229	JP 1998-229154	19980813
JP 3003680	B2	20000131		
PRIORITY APPLN. INFO.:			JP 1998-229154	19980813

AB The title polymer has the general formula [CH2CR1(CO2R2CO2H)]x[CH2CR5(CONHCH2OR6)]z (I), [CH2CR3(CO2R4OH)]y[CH2CR5(CONHCH2OR6)]z (II) or [CH2CR1(CO2R2CO2H)]x[CH2CR3(CO2R4OH)]y[CH2C R5(CONHCH2OR6)]z (III) (R1, R3, R5 = H or Me; R2, R4 = C7-18 alkylene having a cross-linked cyclic hydrocarbon group; R6 = H or C1-12 alkyl; x + z = 1, 0 < x < 1, and 0 < z < 1 in I; y + z = 1, 0 < y < 1, and 0 < z < 1 in II; x + y + z = 1, 0 < x < 1, 0 < y< 1, and 0 < z < 1 in III) and a weight average mol. weight of 1000-500,000. The title resist comprises the polymer and a **photoacid generator** and is coated on a substrate, patternwise exposed to light of wavelength 180-220 nm, heat-treated, and developed to form a resist pattern. The polymer shows high transparency toward short wavelength light of ≤220 nm such as ArF excimer laser beams and improved dry etch resistance.

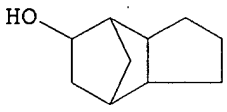
IT **259528-63-7P 259528-65-9P 259528-66-0P 259528-67-1P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplification-type photoresist containing acrylic polymer and **photoacid generator**)

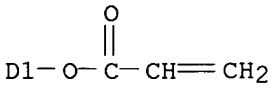
RN 259528-63-7 HCA

CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-6(or 7)-[(1-oxo-2-propenyl)oxy]-, polymer with N-(hydroxymethyl)-2-propenamide and octahydrohydroxy-4,7-methano-1H-inden-1(or 2)-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

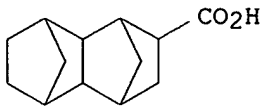
CRN 217654-90-5
CMF C13 H18 O3
CCI IDS

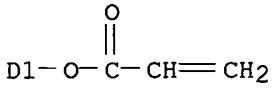




CM 2

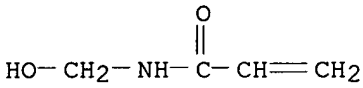
CRN 195398-52-8
CMF C16 H20 O4
CCI IDS





CM 3

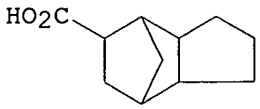
CRN 924-42-5
CMF C4 H7 N O2

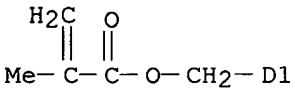


RN 259528-65-9 HCA
CN 4,7-Methano-1H-indene-5-carboxylic acid, octahydro[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-, polymer with N-(hydroxymethyl)-2-propenamide and octahydro-5(or 6)-hydroxy-4,7-methano-1H-inden-1(2 or 3)-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

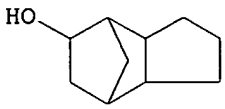
CRN 259528-64-8
CMF C16 H22 O4
CCI IDS

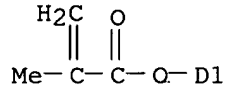




CM 2

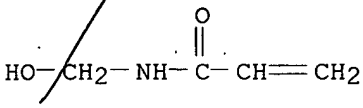
CRN 220138-05-6
CMF C14 H20 O3
CCI IDS





CM 3

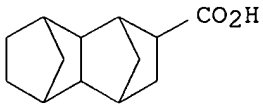
CRN 924-42-5
CMF C4 H7 N O2

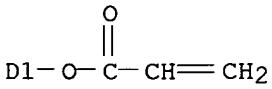


RN 259528-66-0 HCA
CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, decahydro-6(or 7)-[(1-oxo-2-propenyl)oxy]-, polymer with N-(methoxymethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

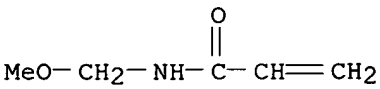
CRN 195398-52-8
CMF C16 H20 O4
CCI IDS





CM 2

CRN 3644-11-9
CMF C5 H9 N O2

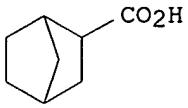


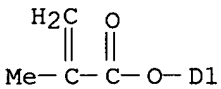
RN 259528-67-1 HCA

CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with N-(methoxymethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

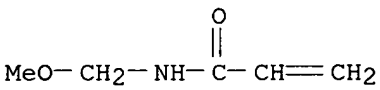
CRN 210641-03-5
CMF C12 H16 O4
CCI IDS





CM 2

CRN 3644-11-9
CMF C5 H9 N O2



IC ICM C08F020-18
ICS C08F020-28; C08F020-36; C08L033-06; C08L033-26; G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST chem amplification resist **photoacid generator**; alicyclic acrylic polymer **neg photoresist**

IT **Negative photoresists**
(chemical amplification-type photoresist containing acrylic polymer and **photoacid generator**)

IT **259528-63-7P 259528-65-9P 259528-66-0P 259528-67-1P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chemical amplification-type photoresist containing acrylic polymer and **photoacid generator**)

IT 84563-54-2 171292-12-9
RL: TEM (Technical or engineered material use); USES (Uses)
(chemical amplification-type photoresist containing acrylic polymer and **photoacid generator**)

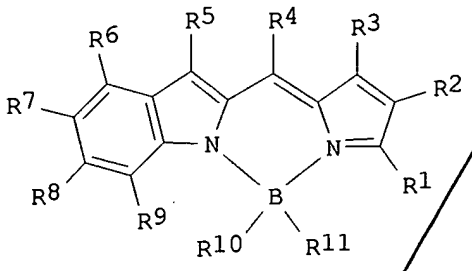
L65 ANSWER 15 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 132:173401 HCA
TITLE: Positive-working visible ray-sensitive resin composition and its usage

INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira; Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara, Hiroshi; Takuma, Keisuke
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000056458	A2	20000225	JP 1998-221922	19980805

PRIORITY APPLN. INFO.: JP 1998-221922 19980805

OTHER SOURCE(S): MARPAT 132:173401
GI



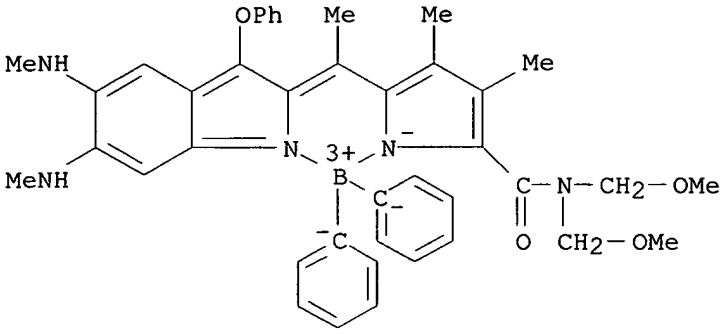
I

AB The title resin composition contains a pos.-working visible ray-sensitive resin and a photosensitizer of a benzopyrromethene compound I (R1-3, R5-9 = H, halo, NO2, CN, OH, NH2, CO2H, SO3H, alkyl, halogenoalkyl, alkoxyalkyl, alkoxy, alkoxyalkoxy, aryloxy, acyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxycarbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxycarbonyl, aralkyloxycarbonyl, alkoxycarbonylalkoxycarbonyl, alkylcarbonylalkoxycarbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl; alkylamino, dialkylamino, mono(hydroxyalkyl)amino, di(hydroxyalkyl)amino; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R10, R11 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy). A composition for pos.-working visible ray-sensitive materials comprising the resin composition and a solvent and a pos.-working resist material containing the resin composition on a substrate are also claimed. The composition shows high sensitivity toward visible rays, especially Ar lasers and YAG laser second harmonics and improved

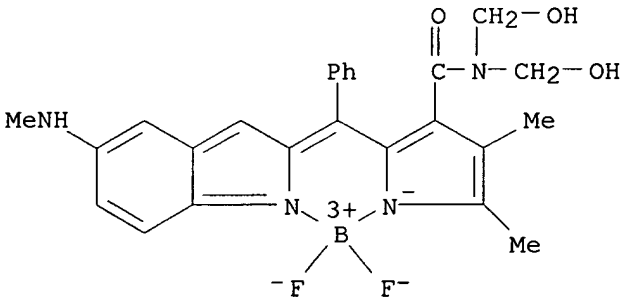
storage stability.

IT **250734-22-6 250734-28-2**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

RN 250734-22-6 HCA
CN Boron, [5-[1-[5,6-bis(methylamino)-3-phenoxy-2H-indol-2-ylidene-κN]ethyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato-κN1]diphenyl-, (T-4)- (9CI) (CA INDEX NAME)



RN 250734-28-2 HCA
CN Boron, [N,N-bis(hydroxymethyl)-4,5-dimethyl-2-[[5-(methylamino)-2H-indol-2-ylidene-κN]phenylmethyl]-1H-pyrrole-3-carboxamidato-κN1]difluoro-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-029
ICS G03F007-004; G03F007-039; C08F002-50

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT 85342-62-7, NAI 105
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

IT 244172-55-2 250733-86-9 250733-87-0 250733-88-1 250733-89-2
250733-90-5 250733-91-6 250733-92-7 250733-93-8 250733-94-9
250733-95-0 250733-96-1 250733-97-2 250733-98-3 250733-99-4
250734-00-0 250734-01-1 250734-02-2 250734-03-3 250734-04-4
250734-05-5 250734-06-6 250734-07-7 250734-08-8 250734-09-9
250734-11-3 250734-12-4 250734-13-5 250734-14-6 250734-15-7
250734-16-8 250734-17-9 250734-18-0 250734-19-1 250734-20-4

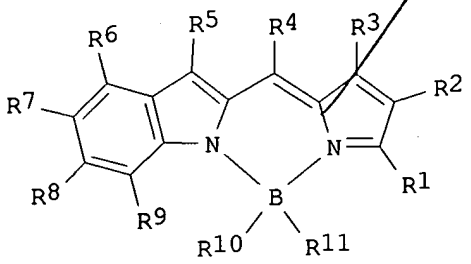
250734-21-5 **250734-22-6** 250734-24-8 250734-25-9
250734-26-0 **250734-28-2** 250734-29-3 250734-30-6
250734-31-7 250734-32-8 250734-33-9 250734-34-0 255905-82-9
255905-83-0 256224-65-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

L65 ANSWER 16 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 132:173398 HCA
TITLE: Positive-working visible ray-sensitive resin composition containing benzopyrromethene boron complex sensitizer and its usage
INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira; Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara, Hiroshi; Takuma, Keisuke
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000056450	A2	20000225	JP 1998-221923	19980805

PRIORITY APPLN. INFO.: JP 1998-221923 19980805

OTHER SOURCE(S): MARPAT 132:173398
GI



I

AB The title resin composition, used under safelight having a maximal wavelength in the range of 500-620 nm and large spectral luminous efficiency for an individual observer, contains a pos.-working visible ray-sensitive resin and a photosensitizer of a benzopyrromethene compound I (R1-3, RR5-9 = H, halo, NO2, CN, OH, NH2, CO2H, SO3H, alkyl, halogenoalkyl, alkoxyalkyl, alkoxy, alkoxyalkoxy, aryloxy, acyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl,

dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxycarbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxycarbonyl, aralkyloxycarbonyl, alkoxycarbonylalkoxycarbonyl, alkylcarbonylalkoxycarbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl, alkylamino, dialkylamino, mono(hydroxyalkyl)amino, di(hydroxyalkyl)amino; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R10, R11 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy) and the absorbance of the unexposed coating film made of the composition is ≤0.5 in the range of the maximal wavelength of the above safelight ±30 nm. A composition for pos.-working visible ray-sensitive materials comprising the resin composition and a solvent and a pos.-working visible ray-sensitive material containing the resin composition on a substrate are also claimed. The composition shows high sensitivity toward visible rays and improved processability under safelight.

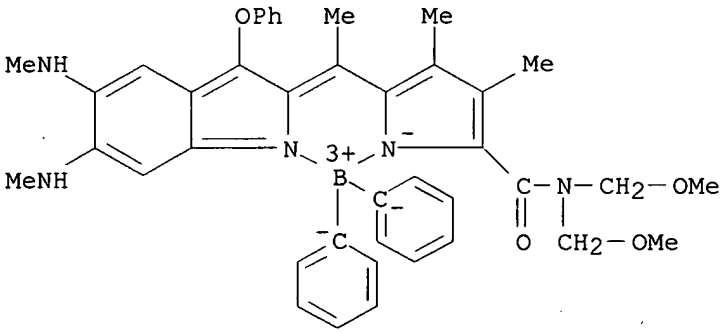
IT **250734-22-6 250734-28-2**

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

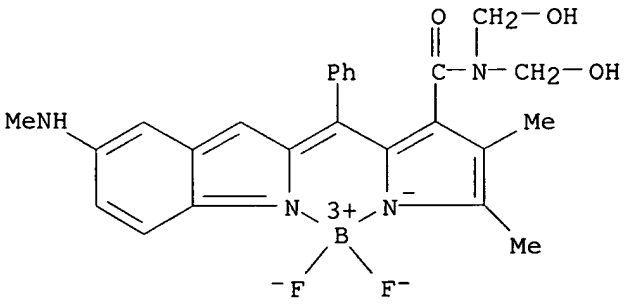
RN 250734-22-6 HCA

CN Boron, [5-[1-[5,6-bis(methylamino)-3-phenoxy-2H-indol-2-ylidene-κN]ethyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato-κN1]diphenyl-, (T-4)- (9CI) (CA INDEX NAME)



RN 250734-28-2 HCA

CN Boron, [N,N-bis(hydroxymethyl)-4,5-dimethyl-2-[[5-(methylamino)-2H-indol-2-ylidene-κN]phenylmethyl]-1H-pyrrole-3-carboxamidato-κN1]difluoro-, (T-4)- (9CI) (CA INDEX NAME)



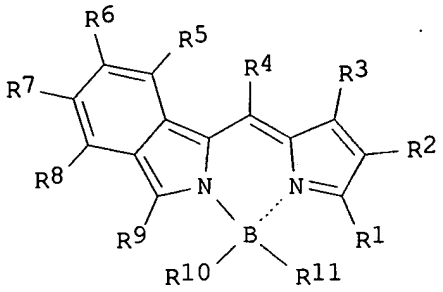
IC ICM G03F007-004

ICS G03F007-029; G03F007-039; C08F002-50
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 85342-62-7, NAI 105
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)
IT 244172-55-2 250733-86-9 250733-87-0 250733-88-1 250733-89-2
250733-90-5 250733-91-6 250733-92-7 250733-93-8 250733-94-9
250733-95-0 250733-96-1 250733-97-2 250733-98-3 250733-99-4
250734-00-0 250734-01-1 250734-02-2 250734-03-3 250734-04-4
250734-05-5 250734-06-6 250734-07-7 250734-08-8 250734-09-9
250734-11-3 250734-12-4 250734-13-5 250734-14-6 250734-15-7
250734-16-8 250734-17-9 250734-18-0 250734-19-1 250734-20-4
250734-21-5 **250734-22-6** 250734-24-8 250734-25-9
250734-26-0 **250734-28-2** 250734-29-3 250734-30-6
250734-31-7 250734-32-8 250734-33-9 250734-34-0 255905-82-9
255905-83-0 256224-65-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(visible ray-sensitive resist composition containing benzopyrromethene boron complex as sensitizer)

L65 ANSWER 17 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 132:158929 HCA
TITLE: Positive-working visible ray-sensitive resin composition containing dipyrromethene boron complex sensitizer and its usage
INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira; Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara, Hiroshi; Takuma, Keisuke
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000047384	A2	20000218	JP 1998-211175	199807 27
PRIORITY APPLN. INFO.:			JP 1998-211175	199807 27

OTHER SOURCE(S): MARPAT 132:158929
GI



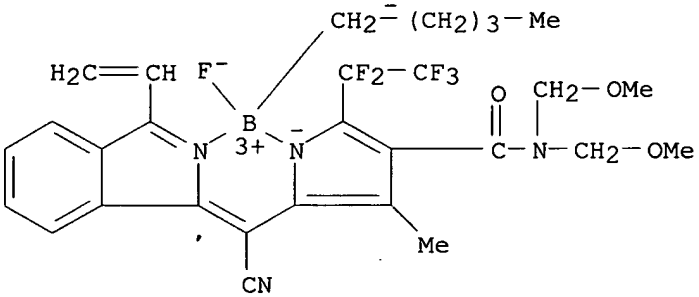
I

AB The title resin composition contains a pos.-working visible ray-sensitive resin and a photosensitizer of an organic B compound I (R1-3, R5-9 = H, halo, NO2, CN, OH, NH2, CO2H, SO3H, alkyl, halogenoalkyl, alkoxy, alkoxyalkoxy, aryloxy, acyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxycarbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxycarbonyl, aralkyloxycarbonyl, alkoxycarbonylalkoxycarbonyl, alkylcarbonylalkoxycarbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R10, R11 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy). A composition for pos.-working visible ray-sensitive materials comprising the resin composition and a solvent and a pos.-working resist material containing the resin composition on a substrate are also claimed. The composition shows good storage stability and high sensitivity toward visible rays, especially Ar lasers and YAG laser second harmonics.

IT **253801-62-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresist composition containing dipyrromethene derivative boron complex as sensitizer)

RN 253801-62-6 HCA

CN Boron, [5-[cyano(3-ethenyl-1H-isoindol-1-ylidene-κN)methyl]-N,N-bis(methoxymethyl)-4-methyl-2-(pentafluoroethyl)-1H-pyrrole-3-carboxamidato-κN1]fluoropentyl-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-039
ICS C08F002-50; G03F007-004; G03F007-029; G03F007-20; C07F005-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 85342-62-7, NAI 105

RL: TEM (Technical or engineered material use); USES (Uses)
(**photo-acid generator**; pos.
photoresist composition containing dipyrromethene derivative boron complex as sensitizer)

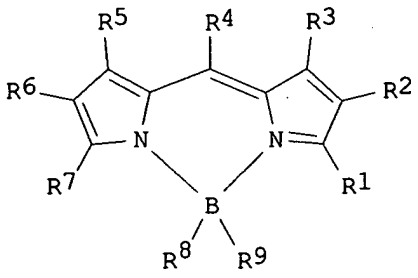
IT 24979-70-2, Poly(p-hydroxystyrene) 24979-70-2D, Poly(p-hydroxystyrene), tetrahydroxypyranyl ethers 25053-96-7, o-Cresol-formaldehyde copolymer 108528-66-1 216450-71-4
216450-72-5 216450-73-6 216450-74-7 216450-75-8 216450-76-9
216450-77-0 216450-78-1 216450-79-2 216450-80-5 216450-81-6
216450-82-7 216450-83-8 216450-84-9 216450-85-0 216450-86-1
216450-87-2 216450-89-4 216450-91-8 216450-93-0 216450-95-2
216450-97-4 216450-99-6 216451-01-3 216451-03-5 216451-04-6
216451-05-7 216451-06-8 216451-07-9 223252-77-5 223252-79-7
223563-99-3 223564-00-9 223564-01-0 223564-02-1 223564-03-2
223564-04-3 223564-05-4 223564-06-5 223564-07-6 223564-08-7
223564-09-8 223564-10-1 223564-11-2 223564-12-3 223564-13-4
223564-14-5 223564-15-6 223564-17-8 223564-19-0 223564-20-3
223564-21-4 223564-22-5 **253801-62-6** 253801-63-7
253801-64-8
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresist composition containing dipyrromethene derivative boron complex as sensitizer)

L65 ANSWER 18 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 132:130023 HCA
TITLE: Positive-working visible ray-sensitive resin composition containing dipyrromethene boron complex sensitizer and its usage
INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira; Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara, Hiroshi; Takuma, Keisuke
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000029213	A2	20000128	JP 1998-200446	199807 15

PRIORITY APPLN. INFO.: JP 1998-200446 199807 15

OTHER SOURCE(S): MARPAT 132:130023
GI



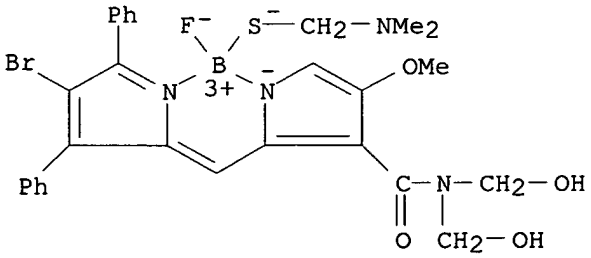
I

AB The title resin composition contains a pos.-working visible ray-sensitive resin and, as a photosensitizer, an organic B compound I [R1-3, R5-7 = H, halo, NO2, CN, OH, NH2, CO2H, SO3H, alkyl, halogenoalkyl, alkoxyalkyl, alkoxy, alkoxyalkoxy, alkoxyalkoxyalkoxy, aryloxy, aralkyloxy, acyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxycarbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxycarbonyl, aralkyloxycarbonyl, alkoxycarbonylalkoxycarbonyl, alkylcarbonylalkoxycarbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl, ≥1 of R1-3 and R5-7 is alkoxy, alkoxyalkoxy, aryloxy or aralkyloxy; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R8, R9 = halo, alkyl, aralkyl, aryl, heteroaryl, alkoxy, alkoxyalkoxy, alkoxyalkoxyalkoxy, halogenoalkyl, alkylthioalkyl, dialkylaminoalkyl, alkylthioalkoxy, dialkylaminoalkoxy, dialkylaminoalkoxyalkoxy, alkylthio, alkoxyalkylthio, alkylthioalkylthio, dialkylaminoalkylthio, aralkyloxy, aryloxy, arylthio, heteroaryloxy, heteroarylthio, when R8 = R9 = halo, R1-3 and R5-7 ≠ alkenyl]. A composition for pos.-working photosensitive materials comprising the above composition and a solvent and a pos.-working resist material containing the above composition on a substrate are also claimed. The composition shows high sensitivity toward visible rays, especially Ar lasers and YAG laser second harmonics and improved storage stability.

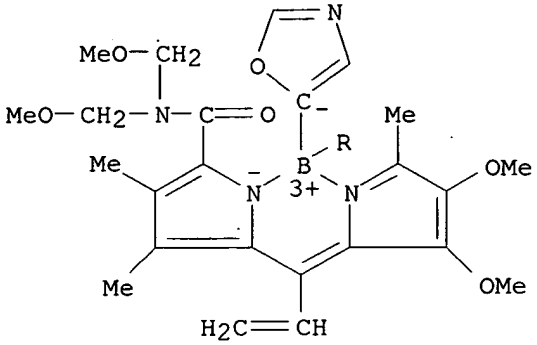
IT **223790-73-6 223790-75-8**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working visible ray-sensitive resin composition containing dipyrromethene boron complex sensitizer)

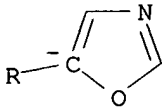
RN 223790-73-6 HCA

CN Boron, [2-[(4-bromo-3,5-diphenyl-2H-pyrrol-2-ylidene-κN)methyl]-N,N-bis(hydroxymethyl)-4-methoxy-1H-pyrrole-3-carboxamidato-κN1][(dimethylamino)methanethiolato-κS]fluoro-, (T-4)- (9CI) (CA INDEX NAME)



RN 223790-75-8 HCA
CN Boron, [5-[1-(3,4-dimethoxy-5-methyl-2H-pyrrol-2-ylidene-κN)-2-propenyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato-κN1]bis(5-oxazolyl)-, (T-4)- (9CI) (CA INDEX NAME)





IC ICM G03F007-039
ICS C08F002-50; G03F007-004; G03F007-029; C07F005-02
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 85342-62-7, NAI 105
RL: TEM (Technical or engineered material use); USES (Uses)
(**photo-acid generator**; pos.-working visible ray-sensitive resin composition containing dipyrromethene boron complex sensitizer)
IT 223790-47-4 223790-49-6 223790-50-9 223790-51-0 223790-52-1
223790-53-2 223790-54-3 223790-55-4 223790-56-5 223790-57-6
223790-58-7 223790-59-8 223790-60-1 223790-61-2 223790-62-3
223790-63-4 223790-64-5 223790-65-6 223790-66-7 223790-67-8
223790-68-9 223790-69-0 223790-70-3 223790-71-4 223790-72-5
223790-73-6 223790-74-7 **223790-75-8**
223790-76-9 223790-77-0 223790-78-1 223790-79-2 223790-80-5
223790-82-7 223790-83-8 223790-84-9 223790-85-0 223790-86-1
252846-96-1 252847-10-2 252847-13-5 252847-14-6
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working visible ray-sensitive resin composition containing dipyrromethene boron complex sensitizer)

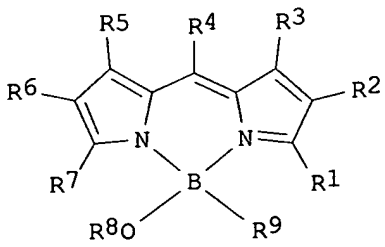
L65 ANSWER 19 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 132:71363 HCA
TITLE: Visible ray-curing resin composition having good processability under safelight and its usage
INVENTOR(S): Imai, Genji; Kogure, Hideo; Ogiso, Akira; Misawa, Tsutayoshi; Nishimoto, Taizo; Tsukahara, Hiroshi; Takuma, Keisuke
PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan; Mitsui Chemicals

Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11352686	A2	19991224	JP 1998-165044	199806 12
SG 93820	A1	20030121	SG 1998-2960	199808 11

PRIORITY APPLN. INFO.:	JP 1997-217721	A	199708 12
	JP 1998-102794	A	199804 14
	JP 1998-124947	A	199805 07
	JP 1998-159493	A	199806 08
	JP 1998-159494	A	199806 08
	JP 1998-165044	A	199806 12
	JP 1998-165045	A	199806 12

OTHER SOURCE(S): MARPAT 132:71363
GI



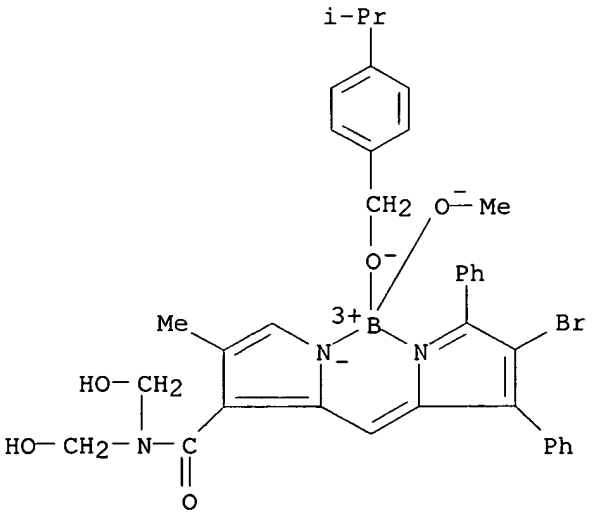
I

AB The title resin composition, used under irradiation using safelight with high spectral luminous efficiency for an individual observer having a maximal wavelength in the range of 500-620 nm, contains (a) a photo-curing resin, (b) a photoreaction initiator, and (c) a photosensitizer containing ≥1 dipyrromethene-B complex I [R1-3, R5- 7 = H, halo, NO2, CN, OH, NH2, CO2H, SO3H, alkyl, halogenoalkyl, alkoxyalkyl, acyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonylamino, arylcarbonylamino, arylaminocarbonyl, aryloxycarbonyl, aralkyl, aryl, heteroaryl, alkylthio, arylthio, alkenyloxycarbonyl, aralkyloxycarbonyl, alkoxycarbonylalkoxycarbonyl, alkylcarbonylalkoxycarbonyl, mono(hydroxyalkyl)aminocarbonyl, di(hydroxyalkyl)aminocarbonyl, mono(alkoxyalkyl)aminocarbonyl, di(alkoxyalkyl)aminocarbonyl, alkenyl; R4 = H, CN, alkyl, aralkyl, aryl, heteroaryl, alkenyl; R8 = alkyl, aryl, aralkyl; R9 = halo, alkoxy, aryloxy, aralkyloxy] and the absorbance of the unexposed coating made of the composition is ≤0.5 in the range of the above safelight maximal wavelength ±30 nm. A visible ray-curing composition and a material containing the resin composition and a solvent are also claimed. The resin composition shows high sensitivity toward visible rays and improved processability under safelight.

IT **250372-83-9 250372-87-3**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing dipyrromethene boron complex as photosensitizer)

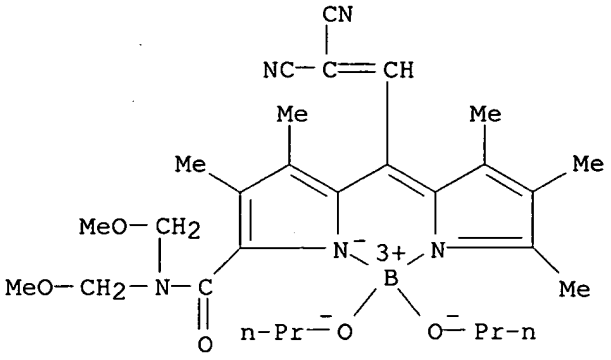
RN 250372-83-9 HCA

CN Boron, [2-[(4-bromo-3,5-diphenyl-2H-pyrrol-2-ylidene-κN)methyl]-N,N-bis(hydroxymethyl)-4-methyl-1H-pyrrole-3-carboxamidato-κN1]methoxy[4-(1-methylethyl)benzenemethanolato]-, (T-4)- (9CI) (CA INDEX NAME)



RN 250372-87-3 HCA

CN Boron, [5-[3,3-dicyano-1-(3,4,5-trimethyl-2H-pyrrol-2-ylidene-κN)-2-propenyl]-N,N-bis(methoxymethyl)-3,4-dimethyl-1H-pyrrole-2-carboxamidato-κN1]dipropoxy-, (T-4)- (9CI) (CA INDEX NAME)



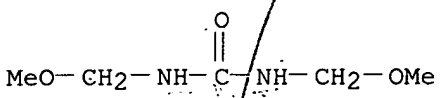
IC ICM G03F007-029
ICS C07F005-02; C08F002-50
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35
IT 85342-62-7
RL: CAT (Catalyst use); USES (Uses)
(**photo-acid generator**; photoresist composition containing dipyrromethene boron complex as photosensitizer)
IT 250372-46-4 250372-48-6 250372-49-7 250372-50-0 250372-51-1
250372-52-2 250372-53-3 250372-54-4 250372-55-5 250372-56-6
250372-58-8 250372-59-9 250372-61-3 250372-63-5 250372-65-7
250372-66-8 250372-68-0 250372-69-1 250372-71-5 250372-72-6
250372-73-7 250372-74-8 250372-75-9 250372-77-1 250372-79-3
250372-81-7 **250372-83-9** 250372-85-1 **250372-87-3**
250372-88-4 250372-90-8 250372-92-0 250372-94-2 250372-95-3
250372-96-4 250372-97-5 250372-99-7 250373-01-4 250373-03-6
250373-05-8 253169-80-1 253169-81-2 253169-82-3 253169-83-4
253169-84-5
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing dipyrromethene boron complex as photosensitizer)

L65 ANSWER 20 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 131:358130 HCA
TITLE: Chemically amplified negative-tone resist using novel acryl polymer for 193-nm lithography
AUTHOR(S): Hada, Hideo; Iwai, Takeshi; Nakayama, Toshimasa
CORPORATE SOURCE: Adv. Mater. Dev. Div., Tokyo Ohka Kogyo Co., Ltd., Kanagawa, Japan
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1999), 3678(Pt. 1, Advances in Resist Technology and Processing XVI), 676-683
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Methacrylic acid-Et α-hydroxymethyl acrylate copolymer was applied in 193 nm chemical amplified neg.-tone resist. The ester and alc. group in the polymer contribute to an intramol. and/or intermol. hybrid crosslinking reactions. In an intramol. crosslink reaction, the ester group reacts with a neighboring hydroxymethyl

group within the polymer chain. As a result, a lactone group is produced in the main polymer chain. In an intermol. crosslink reaction, the ester group reacts with the hydroxymethyl group of another polymer chain to form an ester chain. In this reaction, the polymer is densely crosslinked and fine resist pattern is obtained without swelling problem. The optimized resist composition contains the above polymer, a **photoacid generator** and a small amount of a crosslinker. Under conventional illumination condition, 180 nm line and space pattern are achieved without any kind of swelling problem. The sensitivity is 40 mJ/cm2 with the standard developer, NMD-3 2.38 percent.

IT **141-07-1**, 1,3-Bis(methoxymethyl)urea
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinker; chemical amplified neg.-tone resist using methacrylic acid-Et α-hydroxymethyl acrylate copolymer for 193-nm lithog.)

RN 141-07-1 HCA
CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **Negative photoresists**
(chemical amplified; lithog. characterization of methacrylic acid-Et α-hydroxymethyl acrylate copolymer for 193-nm lithog.)

IT **141-07-1**, 1,3-Bis(methoxymethyl)urea 4356-60-9 15968-37-3 17464-88-9
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinker; chemical amplified neg.-tone resist using methacrylic acid-Et α-hydroxymethyl acrylate copolymer for 193-nm lithog.)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 21 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 130:229992 HCA
TITLE: **Negative**-working **photoresist** composition for short-wavelength light and method for fabricating printed circuit using the same
INVENTOR(S): Iwasa, Shigeyuki; Maeda, Katsumi; Nakano, Kaichiro; Hasegawa, Etsuo
PATENT ASSIGNEE(S): Nec Corp., Japan
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19838650	A1	19990401	DE 1998-19838650	

				199808 25
JP 11133607	A2	19990521	JP 1998-23206	199802 04
JP 3055617	B2	20000626		
TW 512256	B	20021201	TW 1998-87113092	199808 07
US 6074801	A	20000613	US 1998-140652	199808 26
CN 1209570	A	19990303	CN 1998-117484	199808 27

PRIORITY APPLN. INFO.: JP 1997-231344 A 199708 27

JP 1998-23206 A 199802 04

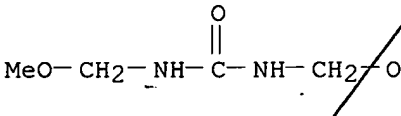
OTHER SOURCE(S): MARPAT 130:229992

AB The **neg.**-working **photoresist** composition comprises a polymer containing a repeating unit -CH2-C(COOR2COOH)R1- [R1 = H, Me; R2 = C7-18-alkylene] and having a weight average mol. weight of 1,000-500,000, a crosslinking agent containing a functional group -OC-N-CH2OR8 [R8 = H, C1-6-alkyl, C3-6-oxoalkyl], and a **photoacid generator**. The photoresist composition is especially suitable for manufacturing DRAMs using 180-220 nm ArF excimer lasers.

IT **141-07-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(**neg.**-working **photoresist** composition for short-wave light comprising)

RN 141-07-1 HCA

CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **neg** working UV **photoresist** compn printed circuit DRAM crosslinker

IT Memory devices
(DRAM (dynamic random access); **neg.**-working **photoresist** composition for short-wave light and method for fabricating printed circuit board using the same)

IT Photolithography
(UV; **neg.**-working **photoresist** composition for short-wave light and method for fabricating printed circuit board using the same)

IT **Negative photoresists**
Printed circuits
(**neg.**-working **photoresist** composition for

short-wave light and method for fabricating printed circuit board using the same)

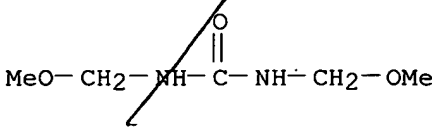
IT **141-07-1** 4356-60-9 17464-88-9 34684-40-7 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane 157959-61-0, Bis(tert-butylphenyl)iodoniumtrifluoromethanesulfonate 171292-12-9 195398-49-3 211377-75-2 220204-16-0 221206-61-7 221206-62-8
RL: TEM (Technical or engineered material use); USES (Uses)
(**neg**.-working **photoresist** composition for short-wave light comprising)

L65 ANSWER 22 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 130:160508 HCA
TITLE: Novel **negative photoresist** based on polar alicyclic polymers for ArF excimer laser lithography
AUTHOR(S): Iwasa, Shigeyuki; Nakano, Kaichiro; Maeda, Katsumi; Hasegawa, Etsuo
CORPORATE SOURCE: Functional Devices Research Laboratories, NEC Corporation, Kanagawa, 216-8555, Japan
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1998), 3333(Pt. 1, Advances in Resist Technology and Processing XV), 417-424
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new polar alicyclic polymer has been developed as an ArF neg. resist polymer. Poly(carboxytetracyclo[4.4.0.12,517,10] dodecyl acrylate-hydroxytricyclo[5.2.1.02,6]decyl acrylate) (poly(CTCDDAm-TCDAOHn)) has carboxyl and hydroxyl groups. It was founded that reactivity of the hydroxyl group was much higher than that of the carboxyl group in the acid-catalyzed crosslinking reaction. Poly(CTCDDA32-TCDAOH68) exhibits good solubility (0.5 μm/s) in the standard developer (2.38% TMAH aqueous), high transparency (70%/0.5 μm) at 193-nm and high thermal stability (decomposition point: 230°C). A chemical amplified neg. resist composed of this polymer and 1,3,4,6-tetrakis(methoxymethyl)glicoluril (TMGU) provided a resolution of 0.18-μm L/S pattern with an ArF exposure system (NA = 0.55) at a 9.2 mJ/cm2 dose.

IT **141-07-1**, 1,3-Bis(methoxymethyl)urea
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinker; **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)

RN 141-07-1 HCA
CN Urea, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST chem amplified **neg photoresist** alicyclic polymer excimer laser lithog

IT **Negative photoresists**
(chemical amplification; **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT Transparency
UV and visible spectra
(crosslinker effects on transmittance of **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT Thermal stability
(**neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT Absorptivity
(of crosslinkers for **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT Solubility
(solubility of **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT **141-07-1**, 1,3-Bis(methoxymethyl)urea 3089-11-0, Hexamethoxymethylmelamine 4356-60-9 17464-88-9, 1,3,4,6-Tetrakis(methoxymethyl)glicoluril
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinker; **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT 75-59-2, Tetramethylammonium hydroxide
RL: NUU (Other use, unclassified); USES (Uses)
(developer; solubility of **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT 211377-75-2
RL: MOA (Modifier or additive use); USES (Uses)
(**neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT 220204-16-0
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(**neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
IT 66003-78-9, Triphenylsulfonium triflate
RL: TEM (Technical or engineered material use); USES (Uses)
(**photoacid generator**; **neg. photoresist** based on poly(carboxytetracyclododecyl acrylate-hydroxytricyclodecyl acrylate) for ArF excimer laser lithog.)
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 23 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 129:142592 HCA
TITLE: Materials and method for positive image formation with IR exposure

INVENTOR(S): Hirai, Katsura
PATENT ASSIGNEE(S): Konica Co., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10171108	A2	19980626	JP 1996-316192	19961127
US 5932392	A	19990803	US 1997-944422	19971006

PRIORITY APPLN. INFO.: JP 1996-265797 A 19961007
JP 1996-316192 A 19961127

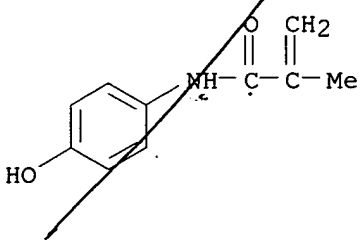
AB The title materials comprise a support and a photosensitive layer containing compds. forming **acids** upon **light irradiation**, resols, acrylic polymers containing aromatic hydroxy group-containing monomer units, and IR absorbers.

IT **210582-12-0P**, N,N-Dimethylolmethacrylamide-ethyl acrylate-ethyl methacrylate-acrylonitrile-N-(4-hydroxyphenyl)methacrylamide copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(materials and method for pos. image formation with IR exposure)

RN 210582-12-0 HCA
CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with N,N-bis(hydroxymethyl)-2-methyl-2-propenamide, ethyl 2-propenoate, N-(4-hydroxyphenyl)-2-methyl-2-propenamide and 2-propenenitrile (9CI) (CA INDEX NAME)

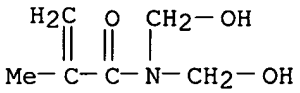
CM 1

CRN 19243-95-9
CMF C10 H11 N O2



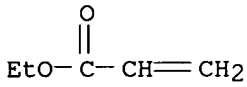
CM 2

CRN 5138-24-9
CMF C6 H11 N O3



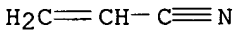
CM 3

CRN 140-88-5
CMF C5 H8 O2



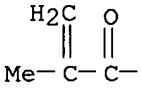
CM 4

CRN 107-13-1
CMF C3 H3 N



CM 5

CRN 97-63-2
CMF C6 H10 O2



IC ICM G03F007-004
ICS G03F007-00; G03F007-033; G03F007-039; G03F007-30
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 24979-71-3P, p-Hydroxystyrene-methyl methacrylate copolymer 136826-54-5P, Ethyl acrylate-ethyl methacrylate-acrylonitrile-N-(4-hydroxyphenyl)methacrylamide copolymer 210582-11-9P, Ethyl acrylate-ethyl methacrylate-acrylonitrile-vinylbenzyl acetate-N-(4-hydroxyphenyl)methacrylamide copolymer **210582-12-0P**, N,N-Dimethylolmethacrylamide-ethyl acrylate-ethyl methacrylate-acrylonitrile-N-(4-hydroxyphenyl)methacrylamide copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(materials and method for pos. image formation with IR exposure)

L65 ANSWER 24 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 128:121756 HCA
TITLE: Positive image-forming composition

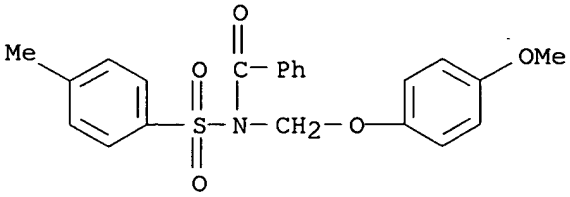
INVENTOR(S): Kawamura, Koichi; Uenishi, Kazuya
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 49 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 814381	A1	19971229	EP 1997-110034	199706 19
EP 814381	B1	20010919		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 10010735	A2	19980116	JP 1996-160276	199606 20
JP 3601738	B2	20041215		
JP 10039514	A2	19980213	JP 1996-190939	199607 19
JP 3601739	B2	20041215		
PRIORITY APPLN. INFO.:			JP 1996-160276 A	199606 20
			JP 1996-190939 A	199607 19

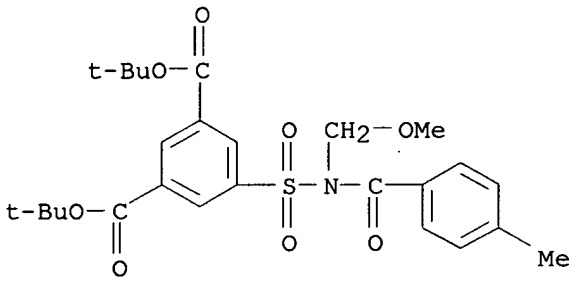
AB A pos. image-forming composition comprises (a) a compound generating an acid by the action of light or heat and (b) at least one compound selected from the N-sulfonylamide compds. represented by the formula L1(SO2NR2COR1)n or L1(CONR2SO2R1)n wherein n is an integer of from 1 to 6, R1 represents an aromatic group or an alkyl group, L1 represents an aromatic group or an alkyl group when n is 1 or L1 represents a polyvalent linkage group constituted of nonmetal atoms when n is from 2 to 6, and R2 represents a tertiary alkyl group, an alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group or (c) a polymer having constitutional units represented by the formula -SO2NR3CO- wherein R3 represents a tertiary alkyl group, an alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group.

IT **201656-41-9 201656-45-3 201656-46-4**
RL: TEM (Technical or engineered material use); USES (Uses)
(photochem. acid generator for pos. photoresists)

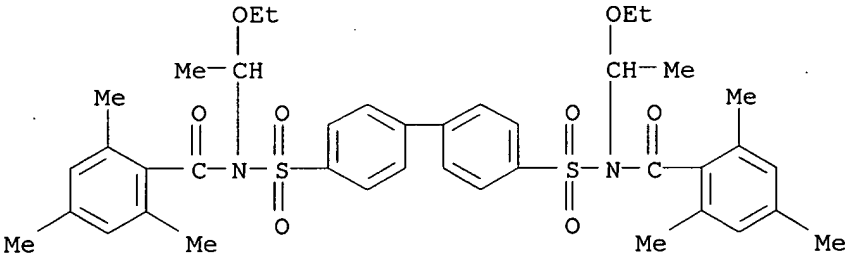
RN 201656-41-9 HCA
CN Benzamide, N-[(4-methoxyphenoxy)methyl]-N-[(4-methylphenyl)sulfonyl]- (9CI) (CA INDEX NAME)



RN 201656-45-3 HCA
CN 1,3-Benzenedicarboxylic acid, 5-[[(methoxymethyl)(4-methylbenzoyl)amino]sulfonyl]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



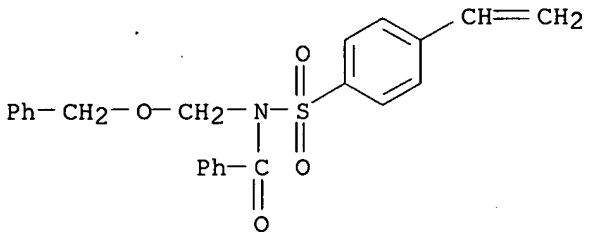
RN 201656-46-4 HCA
CN Benzamide, N,N'-[[1,1'-biphenyl]-4,4'-diylbis(sulfonyl)]bis[N-(1-ethoxyethyl)-2,4,6-trimethyl- (9CI) (CA INDEX NAME)



IT **201656-56-6 201656-57-7**
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresists containing)
RN 201656-56-6 HCA
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with N-[(4-ethenylphenyl)sulfonyl]-N-[(phenylmethoxy)methyl]benzamide (9CI) (CA INDEX NAME)

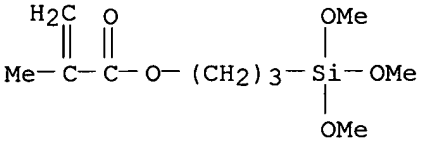
CM 1

CRN 201656-55-5
CMF C23 H21 N O4 S



CM 2

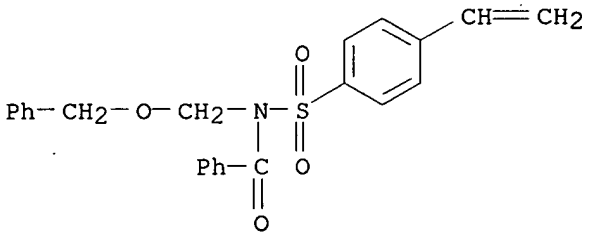
CRN 2530-85-0
CMF C10 H20 O5 Si



RN 201656-57-7 HCA
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with N-[(4-ethenylphenyl)sulfonyl]-N-[(phenylmethoxy)methyl]benzamide (9CI) (CA INDEX NAME)

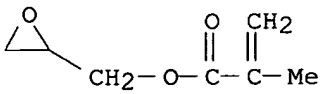
CM 1

CRN 201656-55-5
CMF C23 H21 N O4 S



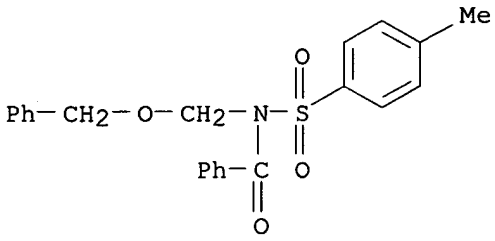
CM 2

CRN 106-91-2
CMF C7 H10 O3



IT **201656-40-8P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use as photochem. acid generator for pos.

photoresists)
RN 201656-40-8 HCA
CN Benzamide, N-[(4-methylphenyl)sulfonyl]-N-[(phenylmethoxy)methyl]-(9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS G03F007-039
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST pos photoimaging compn lithog plate; sulfonylamide **photoacid generator** pos photoimaging compn; thermal acid generator pos photoimaging compn
IT **201656-41-9** 201656-43-1 201656-44-2 **201656-45-3** **201656-46-4** 201656-47-5
RL: TEM (Technical or engineered material use); USES (Uses)
(photochem. acid generator for pos. photoresists)
IT 548-62-9, Crystal violet 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 68541-73-1 201656-53-3 201656-54-4 **201656-56-6** **201656-57-7** 201656-59-9 201656-61-3 201656-63-5 201656-65-7 201656-67-9 201656-68-0
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresists containing)
IT 77-58-7 85-44-9, 1,3-Isobenzofurandione 95-57-8, o-Chlorophenol 22371-56-8, NK-3508 38686-70-3 69432-40-2 117283-53-1, Victoria Pure Blue BOH 1-naphthalenesulfonate
RL: TEM (Technical or engineered material use); USES (Uses)
(pos. photoresists containing sulfonylamide **photoacid generators** and)
IT **201656-40-8P** 201656-42-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation and use as photochem. acid generator for pos. photoresists)

L65 ANSWER 25 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 127:227445 HCA
TITLE: Negative photosensitive acrylic composition for color filter and black matrix
INVENTOR(S): Ochiai, Tamekazu; Takasaki, Ryuichiro
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

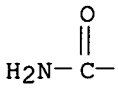
JP 09203806	A2	19970805	JP 1996-12576	199601 29
PRIORITY APPLN. INFO.:			JP 1996-12576	199601 29

AB The composition contains (a) an acrylic polymer with CO2H, (B) a **photoacid generator**, (c) a crosslinking agent which cures a polymer with an acid, (d) a pigment, and (e) a solvent. The photosensitive composition shows good sensitivity and chemical resistance. The **neg. photoresist** is suitable for forming a color pattern of red, blue, and green and also a black matrix.

IT **9011-05-6**, UFR 65
RL: MOA (Modifier or additive use); USES (Uses)
(neg. photosensitive acrylic composition for color filter and black matrix)
RN 9011-05-6 HCA
CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

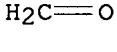
CM 1

CRN 57-13-6
CMF C H4 N2 O



CM 2

CRN 50-00-0
CMF C H2 O



IC ICM G02B005-20
ICS C09D133-02; C09K003-00; G02F001-1335; G03F007-004; G03F007-028; G03F007-039
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 9003-08-1, Nikalac MX 101 **9011-05-6**, UFR 65
RL: MOA (Modifier or additive use); USES (Uses)
(neg. photosensitive acrylic composition for color filter and black matrix)
IT 42573-57-9 93641-25-9 154880-05-4
RL: MOA (Modifier or additive use); USES (Uses)
(**photoacid generator**; neg. photosensitive acrylic composition for color filter and black matrix)

L65 ANSWER 26 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 127:115160 HCA
TITLE: A Water-Castable, Water-Developable Chemically Amplified Negative-Tone Resist

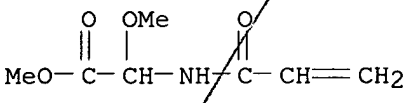
AUTHOR(S): Lin, Qinghuang; Steinhaeusler, Thomas; Simpson, Logan; Wilder, Michelle; Medeiros, David R.; Willson, C. Grant; Havard, Jennifer; Frechet, Jean M. J.
CORPORATE SOURCE: Departments of Chemistry and Chemical Engineering, University of Texas, Austin, TX, 78712-1026, USA
SOURCE: Chemistry of Materials (1997), 9(8), 1725-1730
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This paper describes an "environmentally friendly", water-castable, water-developable photoresist system. The chemical amplified neg.-tone resist system consists of three water-soluble components: a polymer, poly(Me acrylamidoglycolate Me ether), [poly(MAGME)]; a **photoacid generator**, (2,4-dihydroxyphenyl)dimethylsulfonium triflate, and a crosslinker, 1,4-butanediol. In the three-component resist system, the acid generated by photolysis of the **photoacid generator** catalyzes the crosslinking of poly(MAGME) in the exposed regions during postexposure baking, thus rendering the exposed regions insol. in water. Neg.-tone relief images are obtained by developing with pure water. The resist is able to resolve 1 μm line/space features (1:1 aspect ratio) with a deep-UV exposure dose of 100 mJ/cm2 (dose to print). The resist can be used to generate etched copper relief images on printed circuit boards using aqueous sodium persulfate as the etchant. The mechanism of crosslinking has been investigated by model compound studies using 13C NMR.

IT **104452-10-0**, Poly(methyl acrylamidoglycolate methyl ether)
RL: TEM (Technical or engineered material use); USES (Uses)
(water-castable water-developable chemical amplified **neg**.-tone **photoresist** system containing)

RN 104452-10-0 HCA
CN Acetic acid, methoxy[(1-oxo-2-propenyl)amino]-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 77402-03-0
CMF C7 H11 N O4



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

IT Photoresists
(environmentally friendly water-castable water-developable chemical amplified **neg**.-tone **photoresist** system)

IT Printed circuits
(environmentally friendly water-castable water-developable chemical amplified **neg**.-tone **photoresist** system for fabrication of)

IT Crosslinking
(**photoacid**-catalyzed; of poly(Me acrylamidoglycolate Me

ether) by butanediol in chemical amplified **neg.**-tone **photoresist** system)

IT 110-63-4, 1,4-Butanediol, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinker; water-castable water-developable chemical amplified **neg.**-tone **photoresist** system containing)

IT 180787-54-6P, 2,4-Dihydroxyphenyldimethylsulfonium triflate
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**photoacid generator**; water-castable water-developable chemical amplified **neg.**-tone **photoresist** system containing)

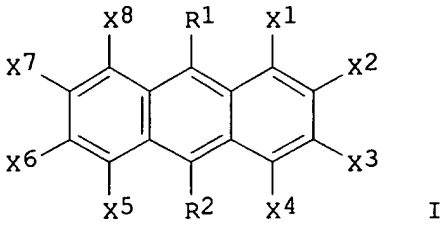
IT **104452-10-0**, Poly(methyl acrylamidoglycolate methyl ether)
RL: TEM (Technical or engineered material use); USES (Uses)
(water-castable water-developable chemical amplified **neg**.-tone **photoresist** system containing)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 27 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 125:261247 HCA
TITLE: Chemically amplified, radiation-sensitive resin composition
INVENTOR(S): Yamachika, Mikio; Kusama, Masatoshi; Kobayashi, Yasutaka; Tsuji, Akira
PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 30 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 726500	A1	19960814	EP 1996-300926	199602 12
EP 726500	B1	20000531		
R: DE, FR, GB, IT, NL				
JP 08217815	A2	19960827	JP 1995-46672	199502 13
JP 3579946	B2	20041020		
US 5731125	A	19980324	US 1996-597561	199602 02
JP 2004310121	A2	20041104	JP 2004-145260	200405 14
PRIORITY APPLN. INFO.:			JP 1995-46672 A	199502 13

OTHER SOURCE(S): MARPAT 125:261247
GI



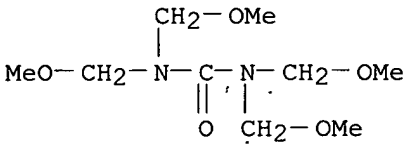
I

AB A chemical amplified, radiation-sensitive resin composition comprises a radiation-sensitive acid generator which **generates** an **acid** upon **irradiation** with a radiation and in which the chemical change due to the catalytic action of the acid changes the solubility of the irradiated portion in a developer to form a pattern, characterized by comprising an anthracene derivative of the formula I (X1-8 = H, halogen, alkyl, alkoxy, aryl, or nitro; R1, R2 = H, halogen, alkyl, alkoxy, aryl, nitro, (CH2)nOR3, (CH2)nCO2R3 where R3 = H, alkyl, or aryl; n = an integer of 0-3), such as anthracene-9-methanol and 9-ethoxycarbonylanthracene.

IT **112288-39-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive resin compns. containing)

RN 112288-39-8 HCA

CN Urea, tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-09

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 101-77-9, Diaminodiphenylmethane 102-69-2, Tripropylamine 102-82-9, Tributylamine 1468-95-7, Anthracene-9-methanol 3089-11-0, Hexa(methoxymethyl)melamine 17464-88-9 41034-83-7, 9-Anthracenepropanoic acid 66003-78-9, Triphenylsulfonium triflate 69432-40-2, 2-(4-Methoxy-1-naphthyl)-4,6-bis(trichloromethyl)-1,3,5-triazine 75802-40-3, 9-Anthracenepentanoic acid **112288-39-8** 133710-62-0 138529-81-4, Bis(cyclohexylsulfonyl)diazomethane
RL: TEM (Technical or engineered material use); USES (Uses)
(radiation-sensitive resin compns. containing)

L65 ANSWER 28 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 122:118984 HCA
TITLE: Pattern-forming material
INVENTOR(S): Kudo, Takanori; Masuda, Seiya; Kinoshita, Yoshiaki; Przybilla, Klaus Juergen; Endo, Hajime; Suehiro, Natsmui; Okazaki, Hiroshi
PATENT ASSIGNEE(S): Hoechst Japan Ltd., Japan
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9415260	A1	19940707	WO 1993-JP1858	199312 22
W: KR, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 06194834	A2	19940715	JP 1992-347042	199212 25
JP 3148426	B2	20010319		
EP 633502	A1	19950111	EP 1994-903042	199312 22
EP 633502	B1	20020320		
R: BE, CH, DE, FR, GB, LI				
US 5691100	A	19971125	US 1996-623735	199603 29

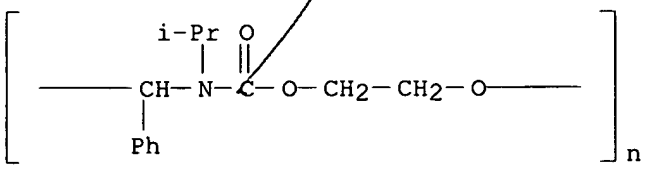
PRIORITY APPLN. INFO.:

JP 1992-347042	A	199212 25
WO 1993-JP1858	W	199312 22
US 1994-296361	B1	199408 25

AB A pattern-forming material having a high exposure tolerance and rarely causing the dimensions of a pattern to vary with respect to the variation of exposure comprises a compound **generating** an **acid** upon **irradiation** with light, a compound generating a base or increasing its basicity upon irradiation with light, a compound having at least one bond capable of being cleft with an acid, and/or a compound not dissolving in water but dissolving in an alkali aqueous solution

IT **160714-37-4**
RL: TEM (Technical or engineered material use); USES (Uses)
(photoimaging and photoresist compns. containing)

RN 160714-37-4 HCA
CN Poly[oxy-1,2-ethanediyloxycarbonyl[(1-methylethyl)imino](phenylmethylene)] (9CI) (CA INDEX NAME)

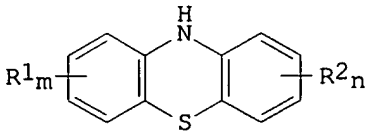


IC ICM G03F007-028
ICS G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Resists
(**photo**-, containing photosensitive **acid**- and base-**generating** compds. and acid-cleaving compds.)
IT 1143-92-6 13433-31-3 29322-78-9, Poly(3-methyl-4-hydroxystyrene) 130100-38-8 **160714-37-4**
RL: TEM (Technical or engineered material use); USES (Uses)
(photoimaging and photoresist compns. containing)

L65 ANSWER 29 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 121:96051 HCA
TITLE: **Negative**-working **photoresists** compositions useful for making semiconductor circuits
INVENTOR(S): Kitaori, Tomoyuki; Koyanagi, Takao; Fukunaga, Masanori
PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06035194	A2	19940210	JP 1992-213264	19920720
PRIORITY APPLN. INFO.:			JP 1992-213264	19920720

OTHER SOURCE(S): MARPAT 121:96051
GI



I

AB The title compns. comprise an alkali-soluble resin, a **photoacid**-**generating** agent, a crosslinking agent which crosslinks the resin under acidic conditions, a sensitizer I [m, n = 1, 2; R1, R2 = CR3R4Ph, CR5R6CR7R8Ph (R3-8 = H, lower alkyl)] which provides photosensitivity in near UV regions to the **photoacid**-**generating** agent. The compns. useful for making semiconductor integrated circuits show high sensitivity toward radiations and provide high resolution patterns with good thermal resistance and dry etching resistance. Thus, a photoresist

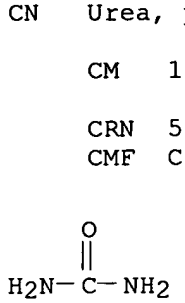
comprised Maruka Lyncur S-2P (polyhydroxystyrene), CBr3SO2Ph, Cymel 1123, and Antage STDP-N.

IT **9011-05-6**, UFR 65
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, photoresist containing)

RN 9011-05-6 HCA
CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

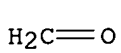
CM 1

CRN 57-13-6
CMF C H4 N2 O



CM 2

CRN 50-00-0
CMF C H2 O



IC ICM G03F007-038
ICS G03F007-004; G03F007-029; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

ST phenothiazine deriv sensitizer photoresist; crosslinking agent photoresist; **photoacid generating** agent photoresist

IT **Resists**
(**photo-**, **neg.**-working, containing phenothiazine derivs. sensitizer)

IT 9003-08-1, Cymel 303 **9011-05-6**, UFR 65 15968-37-3, Cymel 1170 66810-89-7, Cymel 1123
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, photoresist containing)

IT 72-43-5, 2,2-Bis(4-methoxyphenyl)-1,1,1-trichloroethane 17025-47-7, Tribromomethylphenylsulfone 52434-90-9
RL: USES (Uses)
(**photoacid generator**, photoresist containing)

IT 38201-66-0P
RL: PREP (Preparation)
(preparation of, sensitizer, of **photoacid-generator**, photoresist containing)

IT 693-36-7, Antage STDP-N
RL: USES (Uses)
(sensitizer, of **photoacid-generator**, photoresist containing)

L65 ANSWER 30 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 120:257434 HCA
TITLE: **Negative**-working **photoresist** composition

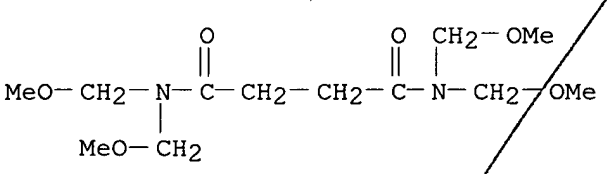
INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Ishiguro, Tomoyo
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05034921	A2	19930212	JP 1991-190059	199107 30

PRIORITY APPLN. INFO.: JP 1991-190059 199107 30

AB The title composition comprises a hydrogenated alkali-soluble phenolic resin, a crosslinking agent(gram absorption coefficient ≤ 20 L/g.cm at 248 nm) capable of reacting with the above resin in an acidic condition and a **photo acid-generator**. The composition shows small UV absorption, gives high-resolution pattern profile and is very useful as far UV photoresists.

IT **154340-09-7**
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, **neg**.-working **photoresist** composition containing)
RN 154340-09-7 HCA
CN Butanediamide, N,N,N',N'-tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
ICS G03F007-004; G03F007-029; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **neg** working **photoresist** compn; alkali sol phenolic resin photoresist
IT Phenolic resins, uses
RL: USES (Uses)
(hydrogenated, alkali-soluble, **neg**.-working **photoresist** composition containing)
IT 1529-68-6, 1,2,3,4-Tetrabromobutane 30362-01-7, 2,4,6-Tris(dibromomethyl)-s-triazine
RL: USES (Uses)
(acid generator, **neg**.-working **photoresist** composition containing)
IT 9003-08-1, Cymel 303 17464-88-9 **154340-09-7**
RL: MOA (Modifier or additive use); USES (Uses)

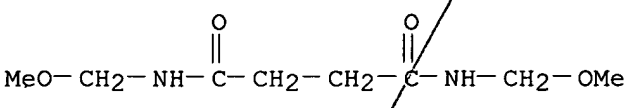
(crosslinking agent, **neg.**-working **photoresist** composition containing)
IT 24979-70-2 59269-51-1
RL: USES (Uses)
(**neg.**-working **photoresist** composition containing)

L65 ANSWER 31 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 120:65909 HCA
TITLE: Negative-working UV photosensitive composition
INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Ishiguro, Tomoyo
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05034903	A2	19930212	JP 1991-194444	199108 02

PRIORITY APPLN. INFO.: JP 1991-194444 199108 02

AB The title composition contains an alkali-soluble resin, a photosensitive acid-generating agent, a crosslinking agent which crosslinks with the alkali-soluble resin under acid condition, and a solvent R1[OCH(Me)CH2]mOR2 (R1, R2 = acetyl, C1-4 alkyl; m = 1, 2). The solvent in the photosensitive composition is nontoxic and the composition shows very good shelf life and good resolution
IT **148124-25-8**
RL: USES (Uses)
(neg.-working photosensitive composition containing)
RN 148124-25-8 HCA
CN Butanediamide, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS G03F007-004; G03F007-029; G03F007-038; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST neg working UV photosensitive compn; UV **photoresist** **neg** shelf life
IT Resists
(**photo**-, UV, **acid-generating**, with improved shelf life)
IT 3089-11-0, Hexamethoxymethyl melamine 52434-90-9, Tris(2,3-dibromopropyl)isocyanurate 59269-51-1, Poly(vinyl phenol) **148124-25-8**
RL: USES (Uses)

(neg.-working photosensitive composition containing)

L65 ANSWER 32 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 119:17958 HCA
TITLE: Negative-working photosensitive compositions using halogenated sulfolane derivative as **photo-acid-generating** agent
INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Takasaki, Ryuichiro
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04338757	A2	19921126	JP 1991-110547	19910515
JP 2943387	B2	19990830		

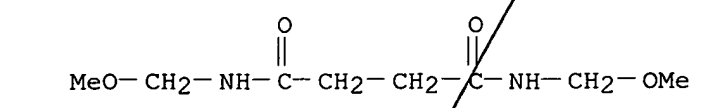
PRIORITY APPLN. INFO.: JP 1991-110547 19910515

OTHER SOURCE(S): MARPAT 119:17958

AB The photosensitive compns. contain an alkali-soluble resin, a crosslinking agent which acts for the resin under acidic conditions, and a halogenated sulfolane derivative as a **photo-acid-generating** agent. The compns. provide high resolution lithog. by exposure with light in deep UV region and i- and g-ray. Thus, a photoresist comprising poly(vinyl phenol), hexamethoxymethylmelamine, and 2,3-dibromosulforane was coated on a Si wafer, patternwise exposed with excimer laser, post-baked, and developed with a Me4NOH solution to form a high resolution pattern.

IT **148124-25-8**
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, **neg.**-working **photoresist** containing)

RN 148124-25-8 HCA
CN Butanediamide, N,N'-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
ICS G03F007-004; G03F007-029; H01L021-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

IT Phenolic resins, uses
RL: USES (Uses)
(**neg.**-working **photoresist** containing)

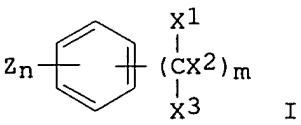
IT **Resists**
(**photo-**, **neg.**-working, halogenated sulfolane as acid generator for)
IT 30129-85-2
RL: USES (Uses)
(acid generator, **neg.**-working **photoresist** containing)
IT 3089-11-0, Hexamethoxymethylmelamine **148124-25-8**
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agent, **neg.**-working **photoresist** containing)
IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 59269-51-1, Polyvinylphenol
RL: USES (Uses)
(**neg.**-working **photoresist** containing)
IT 92-84-2, Phenothiazine
RL: USES (Uses)
(sensitizer, **neg.**-working **photoresist** containing)

L65 ANSWER 33 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 117:141867 HCA
TITLE: Negatively photosensitive composition containing benzene derivative acid-generating agent
INVENTOR(S): Ochiai, Tameichi; Takahashi, Noriaki; Ishiguro, Tomoyo; Shinozaki, Mika
PATENT ASSIGNEE(S): Mitsubishi Kasei K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04107560	A2	19920409	JP 1990-227581	19900829

PRIORITY APPLN. INFO.: JP 1990-227581 19900829

OTHER SOURCE(S): MARPAT 117:141867
GI



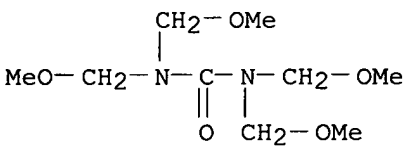
I

AB The composition contains an alkaline-soluble resin, a crosslinking agent, and an I **light**-induced **acid-generating** agent
[X1-3 = H, Cl, Br, (substituted) alkyl; Z = alkyl; n = 0-3; m = 1-3;

≥1 X1-3 = Cl, Br]. The composition is used in manufacture of semiconductor devices. The composition showed high photosensitivity and was exposed in a deep UV region.

IT **112288-39-8**
RL: USES (Uses)
(**neg. photoresist** composition containing, for manufacture of semiconductor device)

RN 112288-39-8 HCA
CN Urea, tetrakis(methoxymethyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-038
ICS G03F007-004; G03F007-031; H01L021-027
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 74

IT Semiconductor devices
(**neg. photoresist** composition for manufacture of, by benzene derivative/acid-generating agent with high sensitivity)

IT 68-36-0, 1,4-Bis(trichloromethyl)benzene
RL: USES (Uses)
(acid-generating agent, **neg. photoresist** composition containing, for manufacture of semiconductor device)

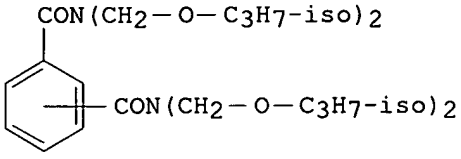
IT 59269-51-1, Poly(vinyl phenol) **112288-39-8**
RL: USES (Uses)
(**neg. photoresist** composition containing, for manufacture of semiconductor device)

L65 ANSWER 34 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 105:226071 HCA
TITLE: Phthalic acid N,N,N',N'-tetrakis(isopropoxymethyl)diamides as tanning agents of emulsion gelatin light-sensitive layers
INVENTOR(S): Zavlin, P. M.; Rodnyanskaya, E. R.; Shevchik, N. D.; Levit, N. V.; Mikhailova, G. L.
PATENT ASSIGNEE(S): Leningrad Institute of Motion-Picture Engineers, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1986, (30), 83.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1250563	A1	19860815	SU 1985-3885900	198503 25

PRIORITY APPLN. INFO.: SU 1985-3885900 198503

GI

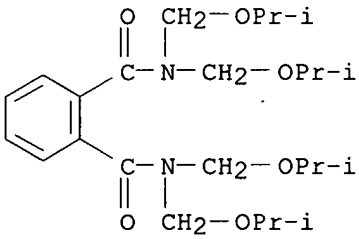


I

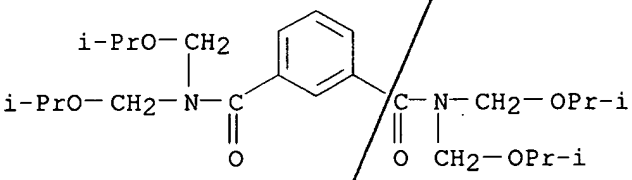
AB Phthalic acid N,N,N',N'-tetrakis(isopropoxymethyl)diamides (I) are used as hardening agents of emulsion gelatin light-sensitive layers.

IT **105532-46-5 105532-47-6 105532-48-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(photog. hardening agent)

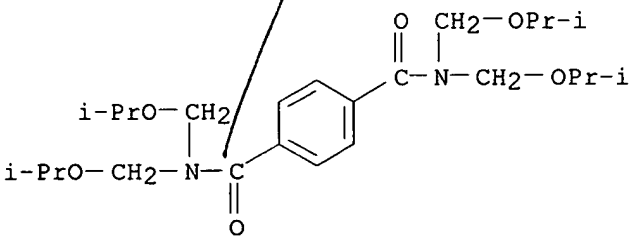
RN 105532-46-5 HCA
CN 1,2-Benzenedicarboxamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]- (9CI) (CA INDEX NAME)



RN 105532-47-6 HCA
CN 1,3-Benzenedicarboxamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]- (9CI) (CA INDEX NAME)



RN 105532-48-7 HCA
CN 1,4-Benzenedicarboxamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]- (9CI) (CA INDEX NAME)



IC ICM C07C103-78

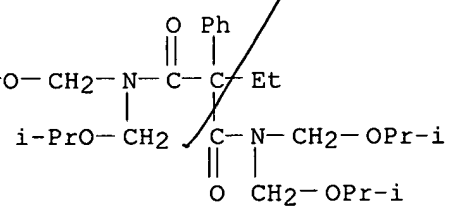
ICS G03C001-30
CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 74
ST phthalic **acid** isopropoxymethyldiamide **photog** hardening agent
IT **105532-46-5 105532-47-6 105532-48-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(photog. hardening agent)

L65 ANSWER 35 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 105:143435 HCA
TITLE: Ethylphenylmalonic acid (N,N,N',N'-tetraisopropoxymethyl)diamide as photographic hardening agent
INVENTOR(S): Zavlin, P. M.; Rodnyanskaya, E. R.; Levit, N. V.; Shevchik, N. D.; Mikhalova, G. L.; Naidis, F. B.
PATENT ASSIGNEE(S): Leningrad Institute of Motion-Picture Engineers, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1985, (46), 100.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1198058	A1	19851215	SU 1984-3794067	19840926

PRIORITY APPLN. INFO.: SU 1984-3794067 19840926

AB Ethylphenylmalonic acid (N,N,N',N'-tetraisopropoxymethyl)diamide is used as a hardening agent in photog. Ag halide-gelatin emulsions.
IT **104458-50-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(photog. hardening agent)
RN 104458-50-6 HCA
CN Propanediamide, 2-ethyl-N,N,N',N'-tetrakis[(1-methylethoxy)methyl]-2-phenyl- (9CI) (CA INDEX NAME)



IC ICM C07C103-38
ICS G03C001-30
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

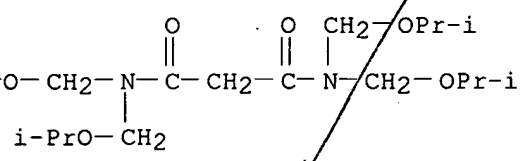
ST ethylphenylmalonic **acid** tetraisopropoxymethyldiamide **photog** hardener
IT **104458-50-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(photog. hardening agent)

L65 ANSWER 36 OF 36 HCA COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 98:225261 HCA
TITLE: Malonic acid (N,N,N',N'-tetraisopropoxymethyl)diamide as a hardening agent for gelatin emulsion photosensitive layers
INVENTOR(S): Zavlin, P. M.; Rodnyanskaya, E. R.; Sorri, Yu. L.; Babkin, V. V.; Kalinovskaya, E. K.
PATENT ASSIGNEE(S): Leningrad Institute of Motion-Picture Engineers, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1983, (11), 135. CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1006429	A1	19830323	SU 1981-3361565	198107 22

PRIORITY APPLN. INFO.: SU 1981-3361565 198107 22

AB Gelatin photoemulsion layers are hardened by malonic acid (N,N,N',N'-tetraisopropoxymethyl)diamide.
IT **85946-77-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(photog. hardening agent)
RN 85946-77-6 HCA
CN Propanediamide, N,N,N',N'-tetrakis[(1-methylethoxy)methyl]- (9CI) (CA INDEX NAME)



IC C07C103-38; G03C001-30
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST malonic **acid** diamide **photog** hardener
IT **85946-77-6**
RL: TEM (Technical or engineered material use); USES (Uses)
(photog. hardening agent)

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